

Search history

Nwaonicha 10/517231

07/06/2006

=> d his full

(FILE 'HOME' ENTERED AT 08:48:07 ON 06 JUL 2006)

FILE 'STNGUIDE' ENTERED AT 08:48:20 ON 06 JUL 2006

FILE 'HCAPLUS' ENTERED AT 08:49:50 ON 06 JUL 2006

L1 1 SEA ABB=ON PLU=ON US2004-517231/APPS
D SCA
SEL RN

FILE 'REGISTRY' ENTERED AT 08:50:22 ON 06 JUL 2006

L2 24 SEA ABB=ON PLU=ON (109-65-9/BI OR 109-72-8/BI OR 117421-97-3/
BI OR 135991-03-6/BI OR 159968-28-2/BI OR 219997-22-5/BI OR
352706-49-1/BI OR 352706-50-4/BI OR 37686-18-3/BI OR 4023-52-3/
BI OR 42978-66-5/BI OR 51728-26-8/BI OR 52408-84-1/BI OR
618-32-6/BI OR 634600-42-3/BI OR 634600-43-4/BI OR 634600-44-5/
BI OR 634600-45-6/BI OR 634600-46-7/BI OR 634600-47-8/BI OR
638-21-1/BI OR 88-95-9/BI OR 938-18-1/BI OR 97949-13-8/BI)
D SCA

FILE 'STNGUIDE' ENTERED AT 08:51:01 ON 06 JUL 2006

FILE 'REGISTRY' ENTERED AT 09:17:37 ON 06 JUL 2006

L3 STRUCTURE UPLOADED
L4 0 SEA SSS SAM L3

FILE 'STNGUIDE' ENTERED AT 09:18:26 ON 06 JUL 2006

FILE 'REGISTRY' ENTERED AT 09:19:50 ON 06 JUL 2006

L5 STRUCTURE UPLOADED
L6 0 SEA SSS SAM L5

FILE 'STNGUIDE' ENTERED AT 09:20:37 ON 06 JUL 2006

FILE 'REGISTRY' ENTERED AT 09:21:35 ON 06 JUL 2006

L7 STRUCTURE UPLOADED
L8 29 SEA SSS SAM L7
L9 STRUCTURE UPLOADED
L10 16 SEA SSS SAM L9
D SCA
D STAT QUE L10
L11 274 SEA SSS FUL L9
SAVE TEMP L11 NWA231STRD/A

FILE 'HCAPLUS' ENTERED AT 09:32:45 ON 06 JUL 2006

L12 111 SEA ABB=ON PLU=ON L11

FILE 'REGISTRY' ENTERED AT 09:32:52 ON 06 JUL 2006

L13 0 SEA SUB=L11 SSS SAM L3
L14 7 SEA SUB=L11 SSS FUL L3
D SCA

FILE 'HCAPLUS' ENTERED AT 09:35:30 ON 06 JUL 2006

FILE 'REGISTRY' ENTERED AT 09:35:45 ON 06 JUL 2006
SAVE TEMP L14 NWA231STRA/A

FILE 'HCAPLUS' ENTERED AT 09:36:25 ON 06 JUL 2006

L15 3 SEA ABB=ON PLU=ON L14

L16 FILE 'CASREACT' ENTERED AT 09:37:19 ON 06 JUL 2006
0 SEA ABB=ON PLU=ON L14/PRO

L17 FILE 'HCAPLUS' ENTERED AT 09:38:15 ON 06 JUL 2006
3 SEA ABB=ON PLU=ON L12 AND L15
D SCA

FILE 'STNGUIDE' ENTERED AT 09:39:18 ON 06 JUL 2006

L18 FILE 'BEILSTEIN' ENTERED AT 09:48:39 ON 06 JUL 2006
0 SEA SSS SAM L3
L19 0 SEA SSS FUL L3

FILE 'BEILSTEIN' ENTERED AT 09:49:12 ON 06 JUL 2006
D STAT QUE L19
D L3

L20 FILE 'REGISTRY' ENTERED AT 09:53:35 ON 06 JUL 2006
0 SEA SUB=L11 SSS SAM L5
L21 9 SEA SUB=L11 SSS FUL L5
SAVE TEMP NWA231STRB/A L21
L22 2 SEA ABB=ON PLU=ON L21 NOT L14
D SCA

L23 FILE 'HCAPLUS' ENTERED AT 09:56:07 ON 06 JUL 2006
1 SEA ABB=ON PLU=ON L22
L24 1 SEA ABB=ON PLU=ON L23 AND L12
D SCA
L25 4 SEA ABB=ON PLU=ON L21
L26 4 SEA ABB=ON PLU=ON L25 AND L12

L27 FILE 'BEILSTEIN' ENTERED AT 09:58:44 ON 06 JUL 2006
0 SEA SSS SAM L5
L28 0 SEA SSS FUL L5

FILE 'BEILSTEIN' ENTERED AT 09:59:06 ON 06 JUL 2006
D STAT QUE L28

FILE 'HCAPLUS' ENTERED AT 10:03:48 ON 06 JUL 2006
SEL RN L26

L29 FILE 'REGISTRY' ENTERED AT 10:04:05 ON 06 JUL 2006
162 SEA ABB=ON PLU=ON (938-18-1/BI OR 109-65-9/BI OR 159968-28-2/
BI OR 1989-53-3/BI OR 352706-49-1/BI OR 352706-50-4/BI OR
88-95-9/BI OR 106-94-5/BI OR 106-95-6/BI OR 108-23-6/BI OR
109-72-8/BI OR 109227-12-5/BI OR 117421-97-3/BI OR 1237-53-2/BI
OR 135991-03-6/BI OR 14602-86-9/BI OR 16331-52-5/BI OR
171056-53-4/BI OR 171056-54-5/BI OR 171056-55-6/BI OR 171056-56
-7/BI OR 171056-57-8/BI OR 171056-58-9/BI OR 171056-59-0/BI OR
17201-83-1/BI OR 17341-93-4/BI OR 1871-76-7/BI OR 1885-14-9/BI
OR 18908-66-2/BI OR 20412-38-8/BI OR 2094-72-6/BI OR 219997-22-
5/BI OR 23288-61-1/BI OR 24468-13-1/BI OR 24625-82-9/BI OR
25629-50-9/BI OR 28920-43-6/BI OR 2937-50-0/BI OR 305813-37-0/B
I OR 312-94-7/BI OR 3229-00-3/BI OR 3282-30-2/BI OR 3395-91-3/B
I OR 34914-36-8/BI OR 352706-33-3/BI OR 352706-34-4/BI OR
352706-35-5/BI OR 352706-36-6/BI OR 352706-37-7/BI OR 352706-38
-8/BI OR 352706-39-9/BI OR 352706-40-2/BI OR 352706-41-3/BI OR
352706-42-4/BI OR 352706-43-5/BI OR 352706-44-6/BI OR 352706-45
-7/BI OR 352706-46-8/BI OR 352706-47-9/BI OR 352706-48-0/BI OR

352706-51-5/BI OR 352706-52-6/BI OR 352706-53-7/BI OR 352706-54-8/BI OR 352706-55-9/BI OR 352706-56-0/BI OR 352706-57-1/BI OR 352706-58-2/BI OR 352706-59-3/BI OR 352706-60-6/BI OR 352706-61-7/BI OR 352706-62-8/BI OR 352706-63-9/BI OR 352706-64-0/BI OR 352706-65-1/BI OR 352706-66-2/BI OR 352706-67-3/BI OR 352706-68-4/BI OR 352706-69-5/BI OR 352706-70-8/BI OR 352706-71-9/BI OR 352706-72-0/BI OR 352706-73-1/BI OR 352706-74-2/BI OR 352706-75-3/BI OR 352706-76-4/BI OR 352706-77-5/BI OR 352706-78-6/BI OR 352706-79-7/BI OR 352706-80-0/BI OR 352706-81-1/BI OR 352706-82-2/BI OR 352706-83-3/BI OR 352706-84-4/BI OR 352706-85-5/BI OR 352706-86-6/BI OR 352706-87-7/BI OR 352706-88-8/BI OR 352706-89-9/BI OR 352706-90-2/BI OR 352706-91-3/BI OR 352706-92-4/BI OR 3527

L30 78 SEA ABB=ON PLU=ON L29 AND X>0
L31 5 SEA ABB=ON PLU=ON L29 AND PMS/CI
D SCA

FILE 'HCAPLUS' ENTERED AT 10:06:01 ON 06 JUL 2006

L32 365 SEA ABB=ON PLU=ON L31
L33 1 SEA ABB=ON PLU=ON L26 AND L32
D SCA

FILE 'REGISTRY' ENTERED AT 10:07:25 ON 06 JUL 2006

L34 4 SEA ABB=ON PLU=ON L29 AND A1/PG
D SCA

FILE 'HCAPLUS' ENTERED AT 10:09:22 ON 06 JUL 2006

L35 10272 SEA ABB=ON PLU=ON L34
L36 2 SEA ABB=ON PLU=ON L35 AND L26
D SCA

FILE 'STNGUIDE' ENTERED AT 10:10:47 ON 06 JUL 2006

FILE 'REGISTRY' ENTERED AT 10:11:15 ON 06 JUL 2006
L37 31 SEA ABB=ON PLU=ON L29 AND X>1

FILE 'HCAPLUS' ENTERED AT 10:11:28 ON 06 JUL 2006

L38 5398 SEA ABB=ON PLU=ON L37
L39 3 SEA ABB=ON PLU=ON L26 AND L38
D SCA
D COST

FILE 'STNGUIDE' ENTERED AT 10:13:36 ON 06 JUL 2006

FILE 'MARPAT' ENTERED AT 10:14:31 ON 06 JUL 2006

L40 1 SEA SSS SAM L5
D SCA
L41 25 SEA SSS FUL L5
L42 23 SEA ABB=ON PLU=ON L41/COM
L43 1 SEA SUB=L41 SSS SAM L3
D SCA
L44 18 SEA SUB=L41 SSS FUL L3
L45 18 SEA ABB=ON PLU=ON L44/COM

FILE 'STNGUIDE' ENTERED AT 10:23:09 ON 06 JUL 2006

FILE 'MARPAT' ENTERED AT 10:24:05 ON 06 JUL 2006

L46 STRUCTURE UPLOADED
L47 0 SEA SUB=L41 SSS SAM L46
L48 4 SEA SUB=L41 SSS FUL L46

FILE 'HCAPLUS' ENTERED AT 10:26:38 ON 06 JUL 2006

L49 1596 SEA ABB=ON PLU=ON WOLF J?/AU
L50 228 SEA ABB=ON PLU=ON HUG G?/AU
L51 6 SEA ABB=ON PLU=ON L49 AND L50

FILE 'WPIX' ENTERED AT 10:27:39 ON 06 JUL 2006

L52 0 SEA SSS SAM L3
L53 4 SEA SSS FUL L3
SEL SDCN
L54 0 SEA ABB=ON PLU=ON (RACO5E/DCR OR RACO5O/DCR OR RA552Z/DCR OR
RA5530/DCR)
L55 0 SEA ABB=ON PLU=ON (RACO5E/SDRN OR RACO5O/SDRN OR RA552Z/SDRN
OR RA5530/SDRN)
L56 2 SEA ABB=ON PLU=ON (RACO5E/DCN OR RACO5O/DCN OR RA552Z/DCN OR
RA5530/DCN)
D SCA
SEL DCSE L53
L57 2 SEA ABB=ON PLU=ON (448417-0-0-0/DCRE OR 448418-0-0-0/DCRE OR
825356-0-0-0/DCRE OR 825366-0-0-0/DCRE)
D SCA

FILE 'STNGUIDE' ENTERED AT 10:34:19 ON 06 JUL 2006

FILE 'WPIX' ENTERED AT 10:34:28 ON 06 JUL 2006

L58 717 SEA ABB=ON PLU=ON WOLF J?/AU
L59 17 SEA ABB=ON PLU=ON HUG G?/AU
L60 6 SEA ABB=ON PLU=ON L58 AND L59

FILE 'STNGUIDE' ENTERED AT 10:34:56 ON 06 JUL 2006

FILE 'HCAPLUS' ENTERED AT 10:35:28 ON 06 JUL 2006
D QUE L51

FILE 'WPIX' ENTERED AT 10:35:41 ON 06 JUL 2006
D QUE L60

FILE 'HCAPLUS, WPIX' ENTERED AT 10:36:01 ON 06 JUL 2006

L61 7 DUP REM L51 L60 (5 DUPLICATES REMOVED)
ANSWERS '1-6' FROM FILE HCAPLUS
ANSWER '7' FROM FILE WPIX
D IBIB ABS L61 1-6
D IALL L61 7

FILE 'STNGUIDE' ENTERED AT 10:37:17 ON 06 JUL 2006

FILE 'REGISTRY' ENTERED AT 10:38:39 ON 06 JUL 2006

FILE 'HCAPLUS' ENTERED AT 10:38:46 ON 06 JUL 2006

D STAT QUE L26
D STAT QUE L33
D STAT QUE L36
D STAT QUE L39
L62 4 SEA ABB=ON PLU=ON L26 OR L33 OR L36 OR L39

FILE 'CASREACT' ENTERED AT 10:40:19 ON 06 JUL 2006
D STAT QUE L16

FILE 'BEILSTEIN' ENTERED AT 10:40:43 ON 06 JUL 2006
D STAT QUE L28

FILE 'MARPAT' ENTERED AT 10:41:00 ON 06 JUL 2006
D STAT QUE L48

L63 FILE 'HCAPLUS, MARPAT' ENTERED AT 10:41:37 ON 06 JUL 2006
6 DUP REM L62 L48 (2 DUPLICATES REMOVED)
ANSWERS '1-4' FROM FILE HCAPLUS
ANSWERS '5-6' FROM FILE MARPAT
D IBIB ABS HITIND HITSTR L63 1-4
D IBIB ABS HIT L63 5-6

L64 FILE 'WPIX' ENTERED AT 10:43:01 ON 06 JUL 2006
D STAT QUE L56
D STAT QUE L57
2 SEA ABB=ON PLU=ON L56 OR L57

L65 FILE 'HCAPLUS, MARPAT, WPIX' ENTERED AT 10:44:08 ON 06 JUL 2006
6 DUP REM L62 L48 L64 (4 DUPLICATES REMOVED)
ANSWERS '1-4' FROM FILE HCAPLUS
ANSWERS '5-6' FROM FILE MARPAT
L66 0 SEA ABB=ON PLU=ON L63 NOT L65

FILE HOME

FILE STNGUIDE
FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jun 30, 2006 (20060630/UP).

FILE HCAPLUS

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 6 Jul 2006 VOL 145 ISS 2
FILE LAST UPDATED: 5 Jul 2006 (20060705/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY
Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9
DICTIONARY FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

FILE CASREACT

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

FILE CONTENT:1840 - 2 Jul 2006 VOL 145 ISS 1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

*
* CASREACT now has more than 10 million reactions *
*

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BEILSTEIN

FILE LAST UPDATED ON JUNE 16, 2006

FILE COVERS 1771 TO 2006.

FILE CONTAINS 9,606,495 SUBSTANCES

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For mo detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
* FOR PRICE INFORMATION SEE HELP COST *

NEW

- * PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.
- * NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.

FILE MARPAT

FILE CONTENT: 1961-PRESENT VOL 145 ISS 1 (20060630/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US	2006094872	04	MAY	2006
DE	102004050353	20	APR	2006
EP	1647549	19	APR	2006
JP	2006108158	20	APR	2006
WO	2006053912	26	MAY	2006
GB	2419093	19	APR	2006
FR	2876691	21	APR	2006
RU	2273632	10	APR	2006
CA	2518664	10	MAR	2006

Expanded G-group definition display now available.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

FILE WPIX

FILE LAST UPDATED: 3 JUL 2006 <20060703/UP>
MOST RECENT DERWENT UPDATE: 200642 <200642/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
<http://scientific.thomson.com/support/patents/coverage/latestupdates/>

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
<http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf> <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS
INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<

=>

=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 10:35:28 ON 06 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 6 Jul 2006 VOL 145 ISS 2
FILE LAST UPDATED: 5 Jul 2006 (20060705/ED)

AUTHOR
SEARCH

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d que L51
L49 1596 SEA FILE=HCAPLUS ABB=ON PLU=ON WOLF J?/AU
L50 228 SEA FILE=HCAPLUS ABB=ON PLU=ON HUG G?/AU
L51 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L49 AND L50

=> file wpix
FILE 'WPIX' ENTERED AT 10:35:41 ON 06 JUL 2006
COPYRIGHT (C) 2006 THE THOMSON CORPORATION

FILE LAST UPDATED: 3 JUL 2006 <20060703/UP>
MOST RECENT DERWENT UPDATE: 200642 <200642/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
<http://scientific.thomson.com/support/patents/coverage/latestupdates/>

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
<http://scientific.thomson.com/media/scpdf/ipcrdwpi.pdf> <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS
INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<
'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d que L60
L58 717 SEA FILE=WPIX ABB=ON PLU=ON WOLF J?/AU
L59 17 SEA FILE=WPIX ABB=ON PLU=ON HUG G?/AU
L60 6 SEA FILE=WPIX ABB=ON PLU=ON L58 AND L59

=> dup rem L51 L60

FILE 'HCAPLUS' ENTERED AT 10:36:01 ON 06 JUL 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIX' ENTERED AT 10:36:01 ON 06 JUL 2006

COPYRIGHT (C) 2006 THE THOMSON CORPORATION

PROCESSING COMPLETED FOR L51

PROCESSING COMPLETED FOR L60

L61 7 DUP REM L51 L60 (5 DUPLICATES REMOVED)

ANSWERS '1-6' FROM FILE HCAPLUS

ANSWER '7' FROM FILE WPIX

=> d ibib abs L61 1-6; d iall L61 7

L61 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2003:991523 HCAPLUS

DOCUMENT NUMBER: 140:28640

TITLE: Multimer forms of monoacylphosphine oxides and bisacylphosphine oxides

INVENTOR(S): Wolf, Jean-Pierre; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003104245	A1	20031218	WO 2003-EP5801	20030603
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2489246	AA	20031218	CA 2003-2489246	20030603
AU 2003274653	A1	20031222	AU 2003-274653	20030603
EP 1511754	A1	20050309	EP 2003-740176	20030603
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
BR 2003012133	A	20050405	BR 2003-12133	20030603
CN 1659175	A	20050824	CN 2003-813477	20030603
JP 2005529167	T2	20050929	JP 2004-511314	20030603
US 2005245768	A1	20051103	US 2004-517231	20041207
PRIORITY APPLN. INFO.:			EP 2002-405473	A 20020611
			WO 2003-EP5801	W 20030603

OTHER SOURCE(S): MARPAT 140:28640

AB The invention relates to dimer and multimer forms of bisacylphosphine oxides (BAPO) compds. of the formula [R2COPO(R1)]nQ[COPO(R1)COR2]m and dimer and multimer forms of monoacylphosphine oxides (MAPO) compds. of the

formula $[R_1PO(R_3)CO]_nQ[COPO(R_3)R_1]_m$: wherein R_1 , R_2 , and R_3 independently of one another are unsubstituted or substituted C_1 - C_{12} alkyl, benzyl, C_1 - C_{12} alkoxy, C_3 - C_6 cycloalkyl or C_5 - C_{14} aryl; Q is a di-tri or tetravalent arylene residue; n is 1-4, m is 0-2, $n + m$ is 2, 3 or 4, with the proviso, that R_1 and R_3 are different from each other. Thus, [phenyl(2,4,6-trimethylbenzoyl)phosphinoyl]{2,4,6-trimethyl-3-phenyl(2,4,6-trimethylbenzoyl)phosphinoanecarbonyl}phenylmethanone was synthesized and used as a photoinitiator for UV-curable coatings.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2003:417756 HCAPLUS

DOCUMENT NUMBER: 139:8199

TITLE: Multimer forms of acylphosphines and their oxide or sulfide derivatives, preparation, and photoinitiator use

INVENTOR(S): Wolf, Jean-Pierre; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 77 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003044030	A1	20030530	WO 2002-EP12680	20021113
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2467576	AA	20030530	CA 2002-2467576	20021113
AU 2002366198	A1	20030610	AU 2002-366198	20021113
EP 1446410	A1	20040818	EP 2002-790367	20021113
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
BR 2002014324	A	20041103	BR 2002-14324	20021113
CN 1589276	A	20050302	CN 2002-822914	20021113
JP 2005509685	T2	20050414	JP 2003-545667	20021113
US 2005004247	A1	20050106	US 2004-495958	20040517
PRIORITY APPLN. INFO.:			EP 2001-811113	A 20011120
			WO 2002-EP12680	W 20021113

OTHER SOURCE(S): MARPAT 139:8199

AB The title compds. have the formula $ACO(R)P:Ex(W)nL$, where $E = O$ or S ; and $x = 0$ or 1 , $A =$ cyclopentyl, cyclohexyl, naphthyl, biphenyl, anthracyl or O , S or N containing 5- or 6- membered heterocyclic ring, where the radicals are unsubstituted or substituted by halogen, C_1 -4-alkyl or C_1 - C_4 alkoxy; or $A = R_1$ -5 C_6 , $R = C_1$ -24-alkyl, unsubstituted or substituted, C_2 -24-alkyl which is interrupted once or more than once by nonconsecutive O , S or NR_{14} and which is unsubstituted or substituted, C_2 - C_{24} alkenyl which is uninterrupted or interrupted once or more than once by nonconsecutive O , S or NR_{14} and which is unsubstituted or substituted,

C5-C24cycloalkenyl which is uninterrupted or interrupted once or more than once by nonconsecutive O, S or NR14 and which is unsubstituted or substituted; C7-C24arylalkyl which is unsubstituted or substituted on the aryl group, C4-C24cycloalkyl which is uninterrupted or interrupted once or more than once by O, S or NR14 and which is unsubstituted or substituted, C8-C24arylcycloalkyl or C8-C24arylcycloalkenyl; or; W = bond, COO or CON(R15); L is a di-tri-or tetravalent linking group; n = 2,3 or 4; R11-15 = hydrocarbyl. A UV-curable white coating contained Ebecryl 830 67.5, hexanediol diacrylate 5.0, trimethylolpropane triacrylate 2.5, TiO2 25.0, and photoinitiator (reaction product of 2,6-bis(bromomethyl)pyridine and Li (2,4,6-trimethylbenzoyl)phenylphosphine) 2.0 parts.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3

ACCESSION NUMBER: 2003:173928 HCAPLUS

DOCUMENT NUMBER: 138:229271

TITLE: Bathochromic mono- and bis-acylphosphine oxides and sulfides as photoinitiators for polymerization of ethylenically unsaturated compounds

INVENTOR(S): Wolf, Jean-Pierre; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 87 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

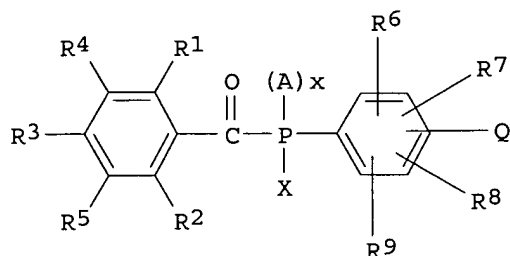
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003019295	A1	20030306	WO 2002-EP9045	20020813
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2454914	AA	20030306	CA 2002-2454914	20020813
EP 1423757	A1	20040602	EP 2002-796226	20020813
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK			
BR 2002011921	A	20041026	BR 2002-11921	20020813
CN 1545643	A	20041110	CN 2002-816281	20020813
JP 2005501124	T2	20050113	JP 2003-523295	20020813
US 2004204613	A1	20041014	US 2004-485836	20040204
PRIORITY APPLN. INFO.:			CH 2001-1542	A 20010821
			WO 2002-EP9045	W 20020813

OTHER SOURCE(S): MARPAT 138:229271

GI



I

AB Disclosed are compds. of the general formula I (A = S, O; x = 0, 1; Q = SR10, N(R11)(R12); R1, R2 = C1-C24-alkyl, OR10, CF3, halogen; R3, R4, R5 = H, C1-C24-alkyl, OR10, halogen; two of the radicals R1, R2, R3, R4, and/or R5 together form C1-C20-alkylene substituted or unsubstituted by O, S, NR13; R6, R7, R8, R9 = H, C1-C24-alkyl, OR10, halogen, C2-C24-alkyl which is substituted one or more times by non-consecutive O, OH, SH; R10, R11 and R12 = H, C1-24-alkyl, C2-24-alkenyl, C3-8-cycloalkyl, Ph, benzyl, C2-20-alkyl; or R11 and R12 together with N form 5-6-membered ring which may contain O, S, NR13; R13 = aH, Ph, C1-12-alkoxy, C1-12-alkyl; and X is as further disclosed in the claims). The inventive compds. are suitable as photoinitiators for printing inks and optical fiber coatings photopolymerizable compns., as well as some other photopolymerizable compns., especially for irradiation with light of relatively long wavelengths.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 2001:903396 HCAPLUS

DOCUMENT NUMBER: 136:20158

TITLE: Preparation of organometallic monoacyl alkyl phosphines as photoinitiators

INVENTOR(S): Wolf, Jean-Pierre; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: Ger. Offen., 64 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10127171	A1	20011213	DE 2001-10127171	20010605
GB 2365430	A1	20020220	GB 2001-12580	20010524
GB 2365430	B2	20020828		
US 2002026049	A1	20020228	US 2001-871373	20010531
US 6737549	B2	20040518		
CA 2349829	AA	20011208	CA 2001-2349829	20010606
FR 2810041	A1	20011214	FR 2001-7438	20010607
CN 1329005	A	20020102	CN 2001-120898	20010607
BE 1014218	A5	20030603	BE 2001-389	20010607
ES 2194584	A1	20031116	ES 2001-1326	20010607
ES 2194584	B1	20050316		
NL 1018251	A1	20011214	NL 2001-1018251	20010608
NL 1018251	C2	20020218		

JP 2002069085	A2	20020308	JP 2001-174045	20010608
BR 2001002319	A	20020528	BR 2001-2319	20010608
US 2003130370	A1	20030710	US 2002-280819	20021025
US 7026017	B2	20060411		
US 2003139485	A1	20030724	US 2002-280820	20021025
US 6969733	B2	20051129		

PRIORITY APPLN. INFO.:

CH 2000-1133	A	20000608
US 2001-871373	A3	20010531

OTHER SOURCE(S):

CASREACT 136:20158; MARPAT 136:20158

AB The preparation of title compds., ArCOP(M)R (Ar = (un)substituted cyclopentyl, cyclohexyl, naphthyl, biphenyl, O-, S-, N-containing 5 or 6-membered heterocyclic ring, etc.; R = (un)substituted C1-24 alkyl, O-, S-, N-containing C2-24 alkyl, alkenyl, (un)substituted C7-24-arylalkyl, C4-24-cycloalkyl, C8-24-arylalkyl, etc.; M = H, Li, Na, K), useful as photoinitiators, is described. Thus, lithiation of isobutylphosphine with BuLi in THF/PhMe followed by treatment with 2,4,6-trimethylbenzoyl chloride gave lithium (2,4,6-trimethylbenzoyl)isobutylphosphine. Reaction of lithium (2,4,6-trimethylbenzoyl)isobutylphosphine with Bu bromide gave title compound, 2,4,6-C6H2COP(O) (Bu) (iso-Bu).

L61 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5

ACCESSION NUMBER: 2001:579226 HCAPLUS

DOCUMENT NUMBER: 135:152962

TITLE: Preparation of organometallic monoacyl aryl phosphines as photoinitiators

INVENTOR(S): Wolf, Jean-pierre; Aebli, Beat Michael; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: Ger. Offen., 84 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10105046	A1	20010809	DE 2001-10105046	20010205
GB 2360283	A1	20010919	GB 2001-2398	20010131
GB 2360283	B2	20020821		
CH 694732	A	20050630	CH 2001-181	20010201
US 2001031898	A1	20011018	US 2001-776657	20010205
US 6399805	B2	20020604		
CA 2334291	AA	20010808	CA 2001-2334291	20010206
BE 1013960	A3	20030114	BE 2001-87	20010206
FR 2804683	A1	20010810	FR 2001-1630	20010207
FR 2804683	B1	20050408		
CN 1308081	A	20010815	CN 2001-103487	20010207
TW 555762	B	20031001	TW 2001-90102568	20010207
ES 2195706	A1	20031201	ES 2001-276	20010207
ES 2195706	B1	20050301		
NL 1017310	A1	20010809	NL 2001-1017310	20010208
NL 1017310	C2	20020618		
BR 2001000910	A	20011002	BR 2001-910	20010208
JP 2001270894	A2	20011002	JP 2001-31650	20010208
US 2002107413	A1	20020808	US 2001-37111	20011022
US 6579663	B2	20030617		

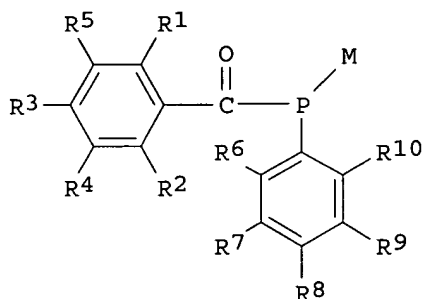
PRIORITY APPLN. INFO.:

CH 2000-255	A	20000208
US 2001-776657	A3	20010205

OTHER SOURCE(S):

CASREACT 135:152962; MARPAT 135:152962

GI



I

AB The preparation of title compds., I (R1, R2 = C1-20 alkyl, OR11, CF3, halo, etc.; R3, R4, R5 = H, C1-20 alkyl, OR11, halo, etc.; R6, R7, R8, R9, R10 = H, O, OH, and SH substituted C1-20 alkyl, C2-20 alkyl, N(R12)(R13), Ph, halo, etc.; R11 = C1-20 alkyl, C3-8 cycloalkyl, Ph, benzyl, C2-20 alkyl, etc.; R12, R13 = H, C1-20 alkyl, C3-8 cycloalkyl, Ph, benzyl, C2-20 alkyl, R12-R13 = O, S, amino substituted C3-5 alkylene; M = H, Li, Na, K), useful as acylphosphine oxide photoinitiators, is described. Thus, lithiation of dichloro(phenyl)phosphine with Li in THF in the presence of naphthalene followed by treatment with 2,4,6-trimethylbenzoyl chloride gave lithium (2,4,6-trimethylbenzoyl)phenylphosphine. Reaction of lithium (2,4,6-trimethylbenzoyl)phenylphosphine with 2,6-dimethoxybenzoyl chloride in THF followed by oxidation with H2O2 gave title compound, 2,4,6-trimethylbenzoyl(2,6-dimethoxybenzoyl)phosphine oxide.

L61 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:550744 HCAPLUS

DOCUMENT NUMBER: 131:299719

TITLE: Structure-Reactivity Relationships in Radical Reactions: A Novel Method for the Simultaneous Determination of Absolute Rate Constants and Structural Features

AUTHOR(S): Gatlik, Iwo; Rzadek, Piotr; Gescheidt, Georg; Rist, Guenther; Hellrung, Bruno; Wirz, Jakob; Dietliker, Kurt; **Hug, Gebhard**; Kunz, Martin; **Wolf, Jean-Pierre**

CORPORATE SOURCE: Institute of Physical Chemistry, University of Basel, Basel, 4056, Switz.

SOURCE: Journal of the American Chemical Society (1999), 121(36), 8332-8336
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Anal. of the ESR line width in time-resolved (TR-ESR) expts. is shown to be a suitable tool for the measurement of addition consts. of phosphinoyl and substituted benzoyl radicals. Compared with kinetic investigations, which make use of the resonance intensity or integral, observation of the line width as a function of monomer concentration has the advantage that the exptl. parameter is not affected by spin-polarization processes and, therefore, a lengthy determination of these polarization parameters is avoided. The resulting

addition consts. are discussed with respect to the exptl. hyperfine coupling consts. and the geometry of the radicals. TR-ESR expts. simultaneously provide rate consts. and ESR parameters and allow structure-reactivity relationships to be established.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L61 ANSWER 7 OF 7 WPIX COPYRIGHT 2006 THE THOMSON CORP on STN
 ACCESSION NUMBER: 2002-001304 [01] WPIX
 DOC. NO. NON-CPI: N2002-000968
 DOC. NO. CPI: C2002-000610
 TITLE: New mono- and di-acyl phosphine derivatives, useful as photoinitiators for light-polymerizable compositions, e.g. coatings or inks.
 DERWENT CLASS: A60 D21 E11 G02 G03 G05 G06 L03 P83
 INVENTOR(S): AEBLI, B M; HUG, G; WOLF, J P
 PATENT ASSIGNEE(S): (CIBA) CIBA SPECIALTY CHEM HOLDING INC
 COUNTRY COUNT: 1
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN	IPC
FR 2804683	A1	20010810	(200201)*		153	C07F009-50	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2804683	A1	FR 2001-1630	20010207

PRIORITY APPLN. INFO: CH 2000-255 20000208

INT. PATENT CLASSIF.:

MAIN: C07F009-50
 SECONDARY: C07F009-28; C07F009-6521; C07F009-653; C07F009-6553;
 C08F002-50; C09D007-12; G03C009-08

BASIC ABSTRACT:

FR 2804683 A UPAB: 20020208

NOVELTY - P-acyl-phosphine derivatives (I).

DETAILED DESCRIPTION - Acyl-phosphines of formula (I) are new.

Ar-CO-P(M)-Ar1 (I)

Ar = 2-R1,3-R4,4-R3,5-R5,6-R2-phenyl (Ara), cyclopentyl, cyclohexyl, naphthyl, biphenyl, anthracenyl, or 5-6 membered heterocycle containing oxygen, sulfur or nitrogen, all optionally substituted by halo and 1-4C alkyl or alkoxy;

R1 and R2 = 1-20C alkyl, OR11, trifluoromethyl or halo;

R3-R5 = hydrogen, 1-20C alkyl, OR11 or halo, or any two of R1-R5 together form a 1-20C alkylene, optionally interrupted by oxygen, sulfur or NR14;

Ar1 = 2-R6,3-R7,4-R8, 5-R9,6-R10-phenyl;

R6-R10 = hydrogen, 1-20C alkyl, 2-20C alkyl interrupted by one or more non-adjacent oxygen and optionally substituted by hydroxy and mercapto, OR11, phenyl or halo;

R11 = hydrogen, 1-20C alkyl, 2-20C alkenyl, 3-8C cycloalkyl, phenyl, benzyl, or 2-20C alkyl interrupted by one or more oxygen or sulfur and optionally substituted by hydroxy and/or mercapto;

R14 = hydrogen, phenyl, 1-12C alkyl or 2-12C alkyl interrupted by

one or more oxygen or sulfur and optionally substituted by hydroxy and/or mercapto;

M = hydrogen, lithium, sodium or potassium.

INDEPENDENT CLAIMS are also included for:

- (a) preparing (I)-(III);
- (b) photosetting composition (A) containing a photopolymerizable ethylenically unsaturated compound and (II) or (III) as photoinitiator;
- (c) photopolymerization of non-volatile monomers, oligomers or polymers containing ethylenic bonds by irradiation of (A) at 200-600 nm;
- (d) substrates coated on at least one surface with (A); and
- (e) production of photographic images in relief by image-forming exposure of the substrate of (d) then removing non-exposed portions with solvent.

Ar-CO-P(=A)x(Ar)-CO-Y1 (II)

Ar-CO-P(=A)x(Ar)-Z1 (III)

A = oxygen or sulfur;

x = 0 or 1;

Y1 = alkyl or other substituent;

Z1 = alkyl or other substituent.

The full definitions are given in the DEFINITIONS (Full Definitions) Field.

USE - (I) are intermediates for other phosphine derivatives, and these are useful as photoinitiators for photopolymerization of ethylenically unsaturated compounds, e.g. for preparation of (pigmented) surface coatings, printing and other inks; printing plates; adhesives; dental compositions; composite materials; stencils; color filters etc., also for encapsulating electronic components, recording of holograms and many other applications.

Dwg.0/0

FILE SEGMENT: CPI GMPI

FIELD AVAILABILITY: AB; DCN

MANUAL CODES: CPI: A02-A09; A08-C09; D08-A; E05-G03B; E05-G03C;
G02-A02; G02-A04A; G02-A05; G03-B02; G05-A; G06-D;
G06-D05; G06-E; G06-F03B; G06-F03C; G06-F03D;
L03-D01D; L03-G02; L03-G05

=> □

=> => file registry

FILE 'REGISTRY' ENTERED AT 10:38:39 ON 06 JUL 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9

DICTIONARY FILE UPDATES: 5 JUL 2006 HIGHEST RN 890705-10-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of

STRUCTURE
SEARCH

(Registry,
CAS REACT,
BEILSTEIN,
MARPAT)

experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 10:38:46 ON 06 JUL 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 6 Jul 2006 VOL 145 ISS 2

FILE LAST UPDATED: 5 Jul 2006 (20060705/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'HCAPLUS' FILE

=> d stat que L26

L5 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L9 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L11 274 SEA FILE=REGISTRY SSS FUL L9

L12 111 SEA FILE=HCAPLUS ABB=ON PLU=ON L11

L21 9 SEA FILE=REGISTRY SUB=L11 SSS FUL L5

L25 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L21

L26 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND L12

=> d stat que L33

L5 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L9 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

```

L11      274 SEA FILE=REGISTRY SSS FUL L9
L12      111 SEA FILE=HCAPLUS ABB=ON PLU=ON L11
L21      9 SEA FILE=REGISTRY SUB=L11 SSS FUL L5
L25      4 SEA FILE=HCAPLUS ABB=ON PLU=ON L21
L26      4 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND L12
L29      162 SEA FILE=REGISTRY ABB=ON PLU=ON (938-18-1/BI OR 109-65-9/BI
OR 159968-28-2/BI OR 1989-53-3/BI OR 352706-49-1/BI OR
352706-50-4/BI OR 88-95-9/BI OR 106-94-5/BI OR 106-95-6/BI OR
108-23-6/BI OR 109-72-8/BI OR 109227-12-5/BI OR 117421-97-3/BI
OR 1237-53-2/BI OR 135991-03-6/BI OR 14602-86-9/BI OR 16331-52-
5/BI OR 171056-53-4/BI OR 171056-54-5/BI OR 171056-55-6/BI OR
171056-56-7/BI OR 171056-57-8/BI OR 171056-58-9/BI OR 171056-59
-0/BI OR 17201-83-1/BI OR 17341-93-4/BI OR 1871-76-7/BI OR
1885-14-9/BI OR 18908-66-2/BI OR 20412-38-8/BI OR 2094-72-6/BI
OR 219997-22-5/BI OR 23288-61-1/BI OR 24468-13-1/BI OR
24625-82-9/BI OR 25629-50-9/BI OR 28920-43-6/BI OR 2937-50-0/BI
OR 305813-37-0/BI OR 312-94-7/BI OR 3229-00-3/BI OR 3282-30-2/
BI OR 3395-91-3/BI OR 34914-36-8/BI OR 352706-33-3/BI OR
352706-34-4/BI OR 352706-35-5/BI OR 352706-36-6/BI OR 352706-37
-7/BI OR 352706-38-8/BI OR 352706-39-9/BI OR 352706-40-2/BI OR
352706-41-3/BI OR 352706-42-4/BI OR 352706-43-5/BI OR 352706-44
-6/BI OR 352706-45-7/BI OR 352706-46-8/BI OR 352706-47-9/BI OR
352706-48-0/BI OR 352706-51-5/BI OR 352706-52-6/BI OR 352706-53
-7/BI OR 352706-54-8/BI OR 352706-55-9/BI OR 352706-56-0/BI OR
352706-57-1/BI OR 352706-58-2/BI OR 352706-59-3/BI OR 352706-60
-6/BI OR 352706-61-7/BI OR 352706-62-8/BI OR 352706-63-9/BI OR
352706-64-0/BI OR 352706-65-1/BI OR 352706-66-2/BI OR 352706-67
-3/BI OR 352706-68-4/BI OR 352706-69-5/BI OR 352706-70-8/BI OR
352706-71-9/BI OR 352706-72-0/BI OR 352706-73-1/BI OR 352706-74
-2/BI OR 352706-75-3/BI OR 352706-76-4/BI OR 352706-77-5/BI OR
352706-78-6/BI OR 352706-79-7/BI OR 352706-80-0/BI OR 352706-81
-1/BI OR 352706-82-2/BI OR 352706-83-3/BI OR 352706-84-4/BI OR
352706-85-5/BI OR 352706-86-6/BI OR 352706-87-7/BI OR 352706-88
-8/BI OR 352706-89-9/BI OR 352706-90-2/BI OR 352706-91-3/BI OR
352706-92-4/BI OR 3527
L31      5 SEA FILE=REGISTRY ABB=ON PLU=ON L29 AND PMS/CI
L32      365 SEA FILE=HCAPLUS ABB=ON PLU=ON L31
L33      1 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L32

```

=> d stat que L36

L5 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L9 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

```

L11      274 SEA FILE=REGISTRY SSS FUL L9
L12      111 SEA FILE=HCAPLUS ABB=ON PLU=ON L11
L21      9 SEA FILE=REGISTRY SUB=L11 SSS FUL L5
L25      4 SEA FILE=HCAPLUS ABB=ON PLU=ON L21
L26      4 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND L12
L29      162 SEA FILE=REGISTRY ABB=ON PLU=ON (938-18-1/BI OR 109-65-9/BI
OR 159968-28-2/BI OR 1989-53-3/BI OR 352706-49-1/BI OR
352706-50-4/BI OR 88-95-9/BI OR 106-94-5/BI OR 106-95-6/BI OR
108-23-6/BI OR 109-72-8/BI OR 109227-12-5/BI OR 117421-97-3/BI

```

OR 1237-53-2/BI OR 135991-03-6/BI OR 14602-86-9/BI OR 16331-52-5/BI OR 171056-53-4/BI OR 171056-54-5/BI OR 171056-55-6/BI OR 171056-56-7/BI OR 171056-57-8/BI OR 171056-58-9/BI OR 171056-59-0/BI OR 17201-83-1/BI OR 17341-93-4/BI OR 1871-76-7/BI OR 1885-14-9/BI OR 18908-66-2/BI OR 20412-38-8/BI OR 2094-72-6/BI OR 219997-22-5/BI OR 23288-61-1/BI OR 24468-13-1/BI OR 24625-82-9/BI OR 25629-50-9/BI OR 28920-43-6/BI OR 2937-50-0/BI OR 305813-37-0/BI OR 312-94-7/BI OR 3229-00-3/BI OR 3282-30-2/BI OR 3395-91-3/BI OR 34914-36-8/BI OR 352706-33-3/BI OR 352706-34-4/BI OR 352706-35-5/BI OR 352706-36-6/BI OR 352706-37-7/BI OR 352706-38-8/BI OR 352706-39-9/BI OR 352706-40-2/BI OR 352706-41-3/BI OR 352706-42-4/BI OR 352706-43-5/BI OR 352706-44-6/BI OR 352706-45-7/BI OR 352706-46-8/BI OR 352706-47-9/BI OR 352706-48-0/BI OR 352706-51-5/BI OR 352706-52-6/BI OR 352706-53-7/BI OR 352706-54-8/BI OR 352706-55-9/BI OR 352706-56-0/BI OR 352706-57-1/BI OR 352706-58-2/BI OR 352706-59-3/BI OR 352706-60-6/BI OR 352706-61-7/BI OR 352706-62-8/BI OR 352706-63-9/BI OR 352706-64-0/BI OR 352706-65-1/BI OR 352706-66-2/BI OR 352706-67-3/BI OR 352706-68-4/BI OR 352706-69-5/BI OR 352706-70-8/BI OR 352706-71-9/BI OR 352706-72-0/BI OR 352706-73-1/BI OR 352706-74-2/BI OR 352706-75-3/BI OR 352706-76-4/BI OR 352706-77-5/BI OR 352706-78-6/BI OR 352706-79-7/BI OR 352706-80-0/BI OR 352706-81-1/BI OR 352706-82-2/BI OR 352706-83-3/BI OR 352706-84-4/BI OR 352706-85-5/BI OR 352706-86-6/BI OR 352706-87-7/BI OR 352706-88-8/BI OR 352706-89-9/BI OR 352706-90-2/BI OR 352706-91-3/BI OR 352706-92-4/BI OR 3527

L34 4 SEA FILE=REGISTRY ABB=ON PLU=ON L29 AND A1/PG
 L35 10272 SEA FILE=HCAPLUS ABB=ON PLU=ON L34
 L36 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L35 AND L26

=> d stat que L39
 L5 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
 L9 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L11 274 SEA FILE=REGISTRY SSS FUL L9
 L12 111 SEA FILE=HCAPLUS ABB=ON PLU=ON L11
 L21 9 SEA FILE=REGISTRY SUB=L11 SSS FUL L5
 L25 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L21
 L26 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L25 AND L12
 L29 162 SEA FILE=REGISTRY ABB=ON PLU=ON (938-18-1/BI OR 109-65-9/BI OR 159968-28-2/BI OR 1989-53-3/BI OR 352706-49-1/BI OR 352706-50-4/BI OR 88-95-9/BI OR 106-94-5/BI OR 106-95-6/BI OR 108-23-6/BI OR 109-72-8/BI OR 109227-12-5/BI OR 117421-97-3/BI OR 1237-53-2/BI OR 135991-03-6/BI OR 14602-86-9/BI OR 16331-52-5/BI OR 171056-53-4/BI OR 171056-54-5/BI OR 171056-55-6/BI OR 171056-56-7/BI OR 171056-57-8/BI OR 171056-58-9/BI OR 171056-59-0/BI OR 17201-83-1/BI OR 17341-93-4/BI OR 1871-76-7/BI OR 1885-14-9/BI OR 18908-66-2/BI OR 20412-38-8/BI OR 2094-72-6/BI OR 219997-22-5/BI OR 23288-61-1/BI OR 24468-13-1/BI OR 24625-82-9/BI OR 25629-50-9/BI OR 28920-43-6/BI OR 2937-50-0/BI OR 305813-37-0/BI OR 312-94-7/BI OR 3229-00-3/BI OR 3282-30-2/BI OR 3395-91-3/BI OR 34914-36-8/BI OR 352706-33-3/BI OR

352706-34-4/BI OR 352706-35-5/BI OR 352706-36-6/BI OR 352706-37-7/BI OR 352706-38-8/BI OR 352706-39-9/BI OR 352706-40-2/BI OR 352706-41-3/BI OR 352706-42-4/BI OR 352706-43-5/BI OR 352706-44-6/BI OR 352706-45-7/BI OR 352706-46-8/BI OR 352706-47-9/BI OR 352706-48-0/BI OR 352706-51-5/BI OR 352706-52-6/BI OR 352706-53-7/BI OR 352706-54-8/BI OR 352706-55-9/BI OR 352706-56-0/BI OR 352706-57-1/BI OR 352706-58-2/BI OR 352706-59-3/BI OR 352706-60-6/BI OR 352706-61-7/BI OR 352706-62-8/BI OR 352706-63-9/BI OR 352706-64-0/BI OR 352706-65-1/BI OR 352706-66-2/BI OR 352706-67-3/BI OR 352706-68-4/BI OR 352706-69-5/BI OR 352706-70-8/BI OR 352706-71-9/BI OR 352706-72-0/BI OR 352706-73-1/BI OR 352706-74-2/BI OR 352706-75-3/BI OR 352706-76-4/BI OR 352706-77-5/BI OR 352706-78-6/BI OR 352706-79-7/BI OR 352706-80-0/BI OR 352706-81-1/BI OR 352706-82-2/BI OR 352706-83-3/BI OR 352706-84-4/BI OR 352706-85-5/BI OR 352706-86-6/BI OR 352706-87-7/BI OR 352706-88-8/BI OR 352706-89-9/BI OR 352706-90-2/BI OR 352706-91-3/BI OR 352706-92-4/BI OR 3527

L37 31 SEA FILE=REGISTRY ABB=ON PLU=ON L29 AND X>1
L38 5398 SEA FILE=HCAPLUS ABB=ON PLU=ON L37
L39 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L26 AND L38

=> s L26 or L33 or L36 or L39
L62 4 L26 OR L33 OR L36 OR L39

=> file casreact
FILE 'CASREACT' ENTERED AT 10:40:19 ON 06 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications.

FILE CONTENT:1840 - 2 Jul 2006 VOL 145 ISS 1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

* CASREACT now has more than 10 million reactions *
* *

Some CASREACT records are derived from the ZIC/VINITI database (1974-1991) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d stat que L16
L3 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L9 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L11 274 SEA FILE=REGISTRY SSS FUL L9
L14 7 SEA FILE=REGISTRY SUB=L11 SSS FUL L3
L16 0 SEA FILE=CASREACT ABB=ON PLU=ON L14/PRO

=> file beilstein

FILE 'BEILSTEIN' ENTERED AT 10:40:43 ON 06 JUL 2006

COPYRIGHT (c) 2006 Beilstein-Institut zur Foerderung der Chemischen Wissenschaften
licensed to Beilstein GmbH and MDL Information Systems GmbH

FILE LAST UPDATED ON JUNE 16, 2006

FILE COVERS 1771 TO 2006.

*** FILE CONTAINS 9,606,495 SUBSTANCES ***

>>>PLEASE NOTE: Reaction Data and substance data are stored in
separate documents and can not be searched together in one query.
Reaction data for BEILSTEIN compounds may be displayed
immediately with the display codes PRE (preparations) and REA
(reactions). A substance answer set retrieved after the search
for a chemical name, a compounds with available reaction
information by combining with PRE/FA, REA/FA or more generally
with RX/FA. The BEILSTEIN Registry Number (BRN) is the link
between a BEILSTEIN compound and belonging reactions. For mo
detailed reaction searches BRNs can be searched as reaction
partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
* FOR PRICE INFORMATION SEE HELP COST *

NEW

* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE
SEARCHED, SELECTED AND TRANSFERRED.
* NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES,
ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A
COMPOUND AT A GLANCE.

=> d stat que L28

L5 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

L28 0 SEA FILE=BEILSTEIN SSS FUL L5

100.0% PROCESSED 632 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.02

=> file marpat

FILE 'MARPAT' ENTERED AT 10:41:00 ON 06 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

FILE CONTENT: 1961-PRESENT VOL 145 ISS 1 (20060630/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US	2006094872	04	MAY	2006
DE	102004050353	20	APR	2006
EP	1647549	19	APR	2006
JP	2006108158	20	APR	2006
WO	2006053912	26	MAY	2006
GB	2419093	19	APR	2006
FR	2876691	21	APR	2006
RU	2273632	10	APR	2006
CA	2518664	10	MAR	2006

Expanded G-group definition display now available.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

=> d stat que L48
L5 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L41 25 SEA FILE=MARPAT SSS FUL L5
L46 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.
L48 4 SEA FILE=MARPAT SUB=L41 SSS FUL L46

100.0% PROCESSED 23 ITERATIONS 4 ANSWERS
SEARCH TIME: 00.00.01

=> dup rem L62 L48
FILE 'HCAPLUS' ENTERED AT 10:41:37 ON 06 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'MARPAT' ENTERED AT 10:41:37 ON 06 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)
PROCESSING COMPLETED FOR L62
PROCESSING COMPLETED FOR L48
L63 6 DUP REM L62 L48 (2 DUPLICATES REMOVED)
ANSWERS '1-4' FROM FILE HCAPLUS

ANSWERS '5-6' FROM FILE MARPAT

=> d ibib abs hitind hitstr L63 1-4; d ibib abs hit L63 5-6

L63 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1

ACCESSION NUMBER: 2003:991523 HCAPLUS

DOCUMENT NUMBER: 140:28640

TITLE: Multimer forms of monoacylphosphine oxides and bisacylphosphine oxides

INVENTOR(S): Wolf, Jean-Pierre; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003104245	A1	20031218	WO 2003-EP5801	20030603
W:				
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW:				
GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2489246	AA	20031218	CA 2003-2489246	20030603
AU 2003274653	A1	20031222	AU 2003-274653	20030603
EP 1511754	A1	20050309	EP 2003-740176	20030603
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003012133	A	20050405	BR 2003-12133	20030603
CN 1659175	A	20050824	CN 2003-813477	20030603
JP 2005529167	T2	20050929	JP 2004-511314	20030603
US 2005245768	A1	20051103	US 2004-517231	20041207
PRIORITY APPLN. INFO.:			EP 2002-405473	A 20020611
			WO 2003-EP5801	W 20030603

OTHER SOURCE(S): MARPAT 140:28640

AB The invention relates to dimer and multimer forms of bisacylphosphine oxides (BAPO) compds. of the formula $[R_2COPO(R_1)]_nQ[COPO(R_1)COR_2]_m$ and dimer and multimer forms of monoacylphosphine oxides (MAPO) compds. of the formula $[R_1PO(R_3)CO]_nQ[COPO(R_3)R_1]_m$; wherein R_1 , R_2 , and R_3 independently of one another are unsubstituted or substituted C1-C12 alkyl, benzyl, C1-C12 alkoxy, C3-C6 cycloalkyl or C5-C14 aryl; Q is a di-tri or tetravalent arylene residue; n is 1-4, m is 0-2, n + m is 2, 3 or 4, with the proviso, that R_1 and R_3 are different from each other. Thus, [phenyl(2,4,6-trimethylbenzoyl)phosphinoyl]{2,4,6-trimethyl-3-[phenyl(2,4,6-trimethylbenzoyl)phosphinoanecarbonyl]phenyl}methanone was synthesized and used as a photoinitiator for UV-curable coatings.

IC ICM C07F009-53

ICS C07F009-6568; C07F009-28; C08F002-50; G03F007-029

CC 42-3 (Coatings, Inks, and Related Products)

Section cross-reference(s): 67

IT 352706-49-1P, [Phenyl(2,4,6-trimethylbenzoyl)phosphinoyl]{2,4,6-trimethyl-3-[phenyl(2,4,6-trimethylbenzoyl)phosphinoanecarbonyl]phenyl}met

hanone 352706-50-4P 634600-42-3P 634600-43-4P

634600-44-5P, [3-(Benzylisobutylphosphinoanecarbonyl)-2,4,6-trimethylphenyl(benzylisobutylphosphinoyl)methanone 634600-45-6P 634600-46-7P 634600-47-8P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)

(photoinitiator; production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

IT 109-72-8, Butyl lithium, uses

RL: CAT (Catalyst use); USES (Uses)

(production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

IT 42978-66-5DP, Tripropylene glycol diacrylate, reaction products with epoxy acrylates and polysiloxane acrylates 51728-26-8DP, Ebecryl 40, reaction products with acrylates, epoxy acrylates, and polysiloxane acrylates 52408-84-1DP, OTA 480, reaction products with acrylates, epoxy acrylates, and polysiloxane acrylates

97949-13-8DP, Ebecryl 605, reaction products with epoxy acrylates and polysiloxane acrylates 135991-03-6DP, Ebecryl 7100, reaction products with acrylates, epoxy acrylates, and polysiloxane acrylates
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

IT 219997-22-5, Dow Corning 57

RL: MOA (Modifier or additive use); USES (Uses)

(silicone additives; production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

IT 88-95-9, Phthaloyldichloride 109-65-9, n-Butylbromide 618-32-6, Benzoylbromide 638-21-1, Phenylphosphine 938-18-1, 2,4,6-Trimethylbenzoylchloride 4023-52-3, Isobutylphosphine 37686-18-3, 3,3',4,4'-Benzophenone tetracarboxylic acid tetrachloride 159968-28-2, 2,4,6-Trimethylbenzoyl-1,3-dicarboxylic acid dichloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting materials; production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

IT 352706-49-1P, [Phenyl(2,4,6-trimethylbenzoyl)phosphinoyl]{2,4,6-trimethyl-3-[phenyl(2,4,6-trimethylbenzoyl)phosphinoanecarbonyl]phenyl}methanone 352706-50-4P 634600-42-3P 634600-43-4P

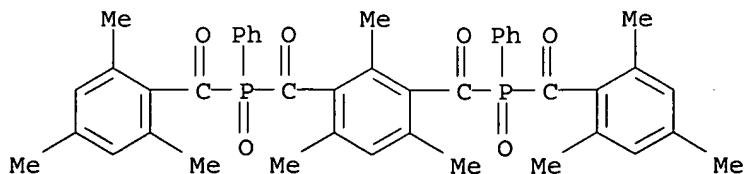
634600-44-5P, [3-(Benzylisobutylphosphinoanecarbonyl)-2,4,6-trimethylphenyl(benzylisobutylphosphinoyl)methanone 634600-45-6P 634600-46-7P 634600-47-8P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PRP (Properties); PREP (Preparation); USES (Uses)

(photoinitiator; production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

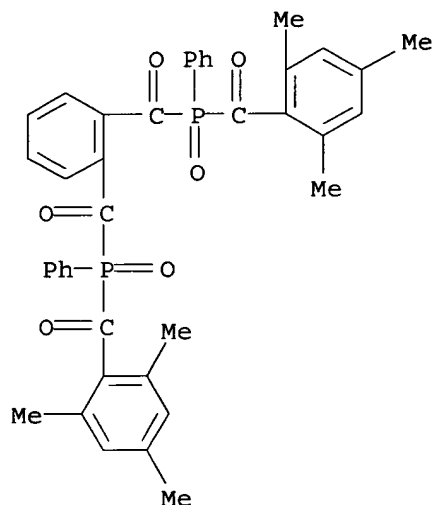
RN 352706-49-1 HCAPLUS

CN Phosphine oxide, [(2,4,6-trimethyl-1,3-phenylene)dicarbonyl]bis[phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



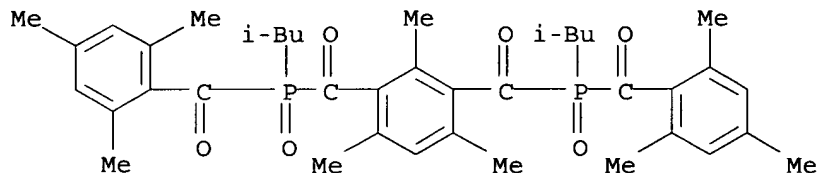
RN 352706-50-4 HCAPLUS

CN Phosphine oxide, (1,2-phenylenedicarbonyl)bis[phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



RN 634600-42-3 HCAPLUS

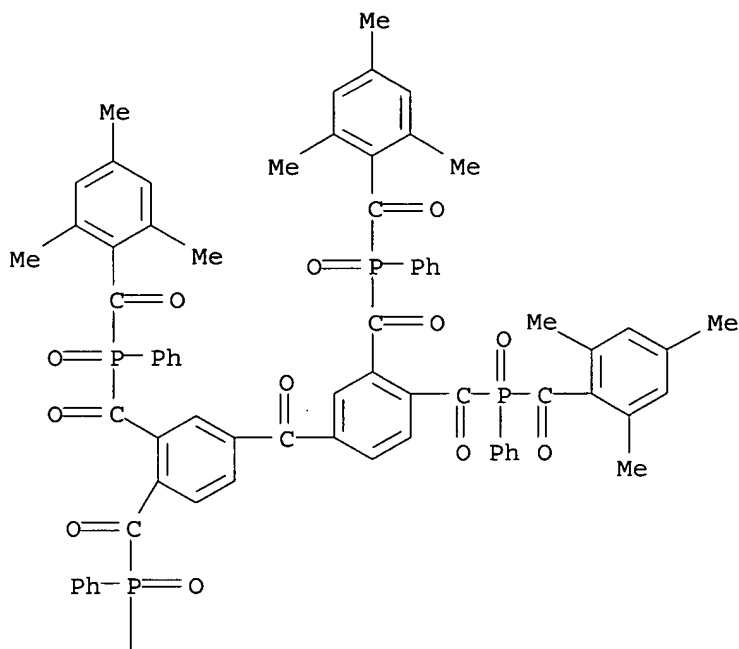
CN Phosphine oxide, [(2,4,6-trimethyl-1,3-phenylene)dicarbonyl]bis[(2-methylpropyl)(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



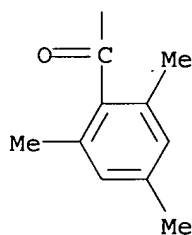
RN 634600-43-4 HCAPLUS

CN Methanone, bis[3,4-bis[[phenyl(2,4,6-trimethylbenzoyl)phosphinyl]carbonyl]phenyl]- (9CI) (CA INDEX NAME)

PAGE 1-A

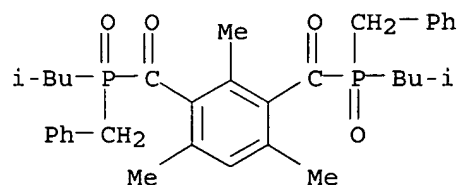


PAGE 2-A



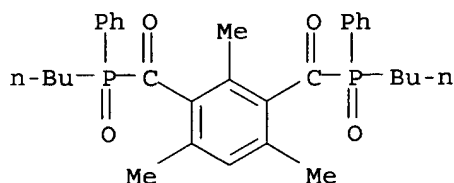
RN 634600-44-5 HCAPLUS

CN Phosphine oxide, [(2,4,6-trimethyl-1,3-phenylene)dicarbonyl]bis[(2-methylpropyl)(phenylmethyl)- (9CI) (CA INDEX NAME)



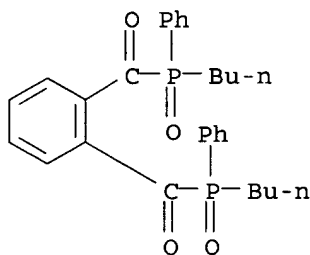
RN 634600-45-6 HCAPLUS

CN Phosphine oxide, [(2,4,6-trimethyl-1,3-phenylene)dicarbonyl]bis[butylphenyl- (9CI) (CA INDEX NAME)



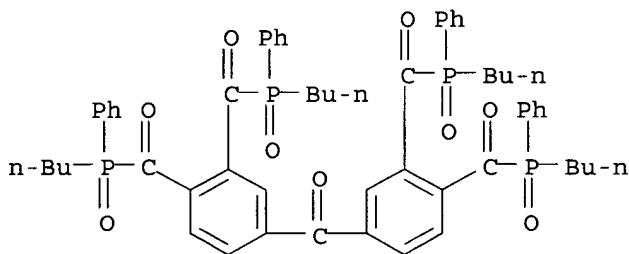
RN 634600-46-7 HCAPLUS

CN Phosphine oxide, (1,2-phenylenedicarbonyl)bis[butylphenyl- (9CI) (CA INDEX NAME)



RN 634600-47-8 HCAPLUS

CN Methanone, bis[3,4-bis[(butylphenylphosphinyl)carbonyl]phenyl]- (9CI) (CA INDEX NAME)



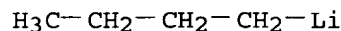
IT 109-72-8, Butyl lithium, uses

RL: CAT (Catalyst use); USES (Uses)

(production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

RN 109-72-8 HCAPLUS

CN Lithium, butyl- (8CI, 9CI) (CA INDEX NAME)



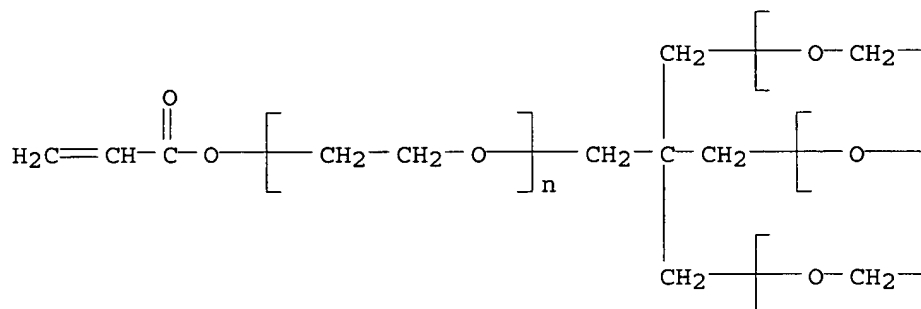
IT 51728-26-8DP, Ebecryl 40, reaction products with acrylates, epoxy acrylates, and polysiloxane acrylates 52408-84-1DP, OTA 480, reaction products with acrylates, epoxy acrylates, and polysiloxane acrylates 97949-13-8DP, Ebecryl 605, reaction products with epoxy acrylates and polysiloxane acrylates 135991-03-6DP, Ebecryl 7100, reaction products with acrylates, epoxy acrylates, and polysiloxane acrylates

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(production of multimer forms of mono- and bis-acylphosphine oxides for
coatings)

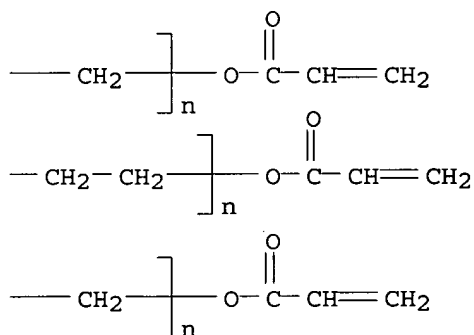
RN 51728-26-8 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -[(1-oxo-2-propenyl)oxy]-,
ether with 2,2-bis(hydroxymethyl)-1,3-propanediol (4:1) (9CI) (CA INDEX
NAME)

PAGE 1-A



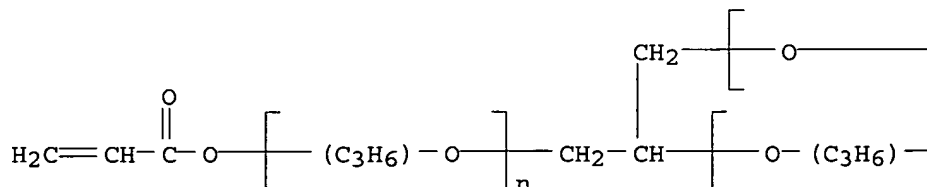
PAGE 1-B



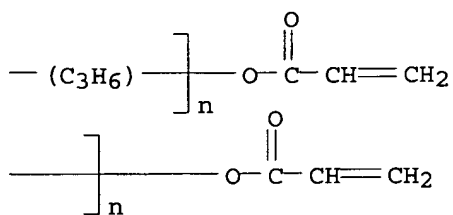
RN 52408-84-1 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], α,α',α'' -1,2,3-
propanetriyltris[ω -[(1-oxo-2-propenyl)oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RN 97949-13-8 HCAPLUS

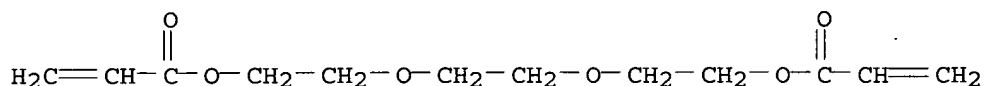
CN 2-Propenoic acid, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 42978-66-5

CMF C15 H24 O6

CCI IDS



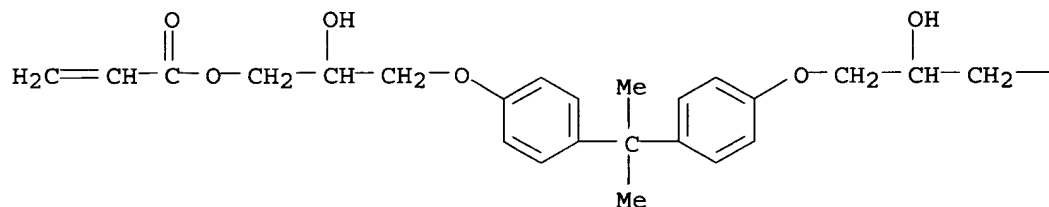
3 (D1-Me)

CM 2

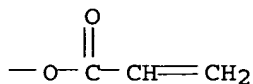
CRN 4687-94-9

CMF C27 H32 O8

PAGE 1-A



PAGE 1-B



RN 135991-03-6 HCAPLUS

CN Ebecryl 7100 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 219997-22-5, Dow Corning 57

RL: MOA (Modifier or additive use); USES (Uses)

(silicone additives; production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

RN 219997-22-5 HCAPLUS

CN Dow Corning 57 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 88-95-9, Phthaloyldichloride 37686-18-3,

3,3',4,4'-Benzophenone tetracarboxylic acid tetrachloride

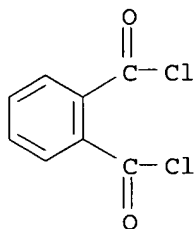
159968-28-2, 2,4,6-Trimethylbenzoyl-1,3-dicarboxylic acid dichloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting materials; production of multimer forms of mono- and bis-acylphosphine oxides for coatings)

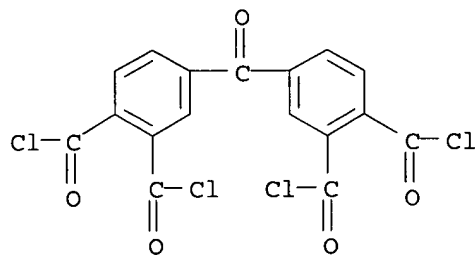
RN 88-95-9 HCAPLUS

CN 1,2-Benzenedicarbonyl dichloride (9CI) (CA INDEX NAME)



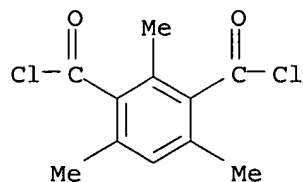
RN 37686-18-3 HCAPLUS

CN 1,2-Benzenedicarbonyl dichloride, 4,4'-carbonylbis- (9CI) (CA INDEX NAME)



RN 159968-28-2 HCAPLUS

CN 1,3-Benzenedicarbonyl dichloride, 2,4,6-trimethyl- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

7

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L63 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2

ACCESSION NUMBER: 2001:579226 HCAPLUS

DOCUMENT NUMBER: 135:152962

TITLE: Preparation of organometallic monoacyl aryl phosphines as photoinitiators

INVENTOR(S): Wolf, Jean-pierre; Aebli, Beat Michael; Hug, Gebhard

PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.

SOURCE: Ger. Offen., 84 pp.

CODEN: GWXXBX

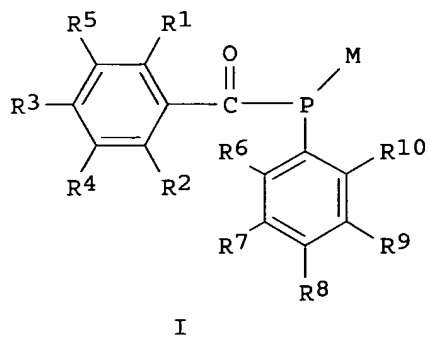
DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

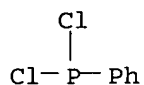
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10105046	A1	20010809	DE 2001-10105046	20010205
GB 2360283	A1	20010919	GB 2001-2398	20010131
GB 2360283	B2	20020821		
CH 694732	A	20050630	CH 2001-181	20010201
US 2001031898	A1	20011018	US 2001-776657	20010205
US 6399805	B2	20020604		
CA 2334291	AA	20010808	CA 2001-2334291	20010206
BE 1013960	A3	20030114	BE 2001-87	20010206
FR 2804683	A1	20010810	FR 2001-1630	20010207
FR 2804683	B1	20050408		
CN 1308081	A	20010815	CN 2001-103487	20010207
TW 555762	B	20031001	TW 2001-90102568	20010207
ES 2195706	A1	20031201	ES 2001-276	20010207
ES 2195706	B1	20050301		
NL 1017310	A1	20010809	NL 2001-1017310	20010208
NL 1017310	C2	20020618		
BR 2001000910	A	20011002	BR 2001-910	20010208
JP 2001270894	A2	20011002	JP 2001-31650	20010208
US 2002107413	A1	20020808	US 2001-37111	20011022
US 6579663	B2	20030617		
PRIORITY APPLN. INFO.:			CH 2000-255	A 20000208
			US 2001-776657	A3 20010205
OTHER SOURCE(S):			CASREACT 135:152962; MARPAT 135:152962	
GI				

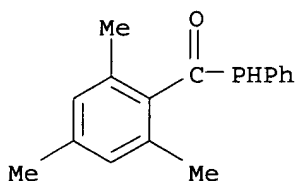


- AB The preparation of title compds., I (R1, R2 = C1-20 alkyl, OR11, CF3, halo, etc.; R3, R4, R5 = H, C1-20 alkyl, OR11, halo, etc.; R6, R7, R8, R9, R10 = H, O, OH, and SH substituted C1-20 alkyl, C2-20 alkyl, N(R12)(R13), Ph, halo, etc.; R11 = C1-20 alkyl, C3-8 cycloalkyl, Ph, benzyl, C2-20 alkyl, etc.; R12, R13 = H, C1-20 alkyl, C3-8 cycloalkyl, Ph, benzyl, C2-20 alkyl, R12-R13 = O, S, amino substituted C3-5 alkylene; M = H, Li, Na, K), useful as acylphosphine oxide photoinitiators, is described. Thus, lithiation of dichloro(phenyl)phosphine with Li in THF in the presence of naphthalene followed by treatment with 2,4,6-trimethylbenzoyl chloride gave lithium (2,4,6-trimethylbenzoyl)phenylphosphine. Reaction of lithium (2,4,6-trimethylbenzoyl)phenylphosphine with 2,6-dimethoxybenzoyl chloride in THF followed by oxidation with H2O2 gave title compound, 2,4,6-trimethylbenzoyl(2,6-dimethoxybenzoyl)phosphine oxide.
- IC ICM C07F009-53
ICS C07F009-50; C07F009-547; C08F002-50; B41N001-00; H01L023-29; B81C001-00; A61K006-00
- CC 29-7 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 74
- IT 644-97-3, Dichloro(phenyl)phosphine 54722-14-4, Isobutylphenylphosphine
RL: RCT (Reactant); RACT (Reactant or reagent)
(lithiation and sequential reaction with acyl chloride)
- IT 352706-35-5P 352706-36-6P 352706-37-7P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with acyl chlorides)
- IT 352706-33-3P 352706-34-4P 352706-38-8P 352706-39-9P
352706-40-2P 352706-41-3P 352706-42-4P 352706-43-5P
352706-44-6P 352706-45-7P 352706-46-8P 352706-47-9P 352706-48-0P
352706-49-1P 352706-50-4P 352706-51-5P 352706-52-6P
352706-53-7P 352706-54-8P 352706-55-9P 352706-56-0P
352706-57-1P 352706-58-2P 352706-59-3P 352706-60-6P 352706-61-7P
352706-62-8P 352706-63-9P 352706-64-0P 352706-65-1P
352706-66-2P 352706-67-3P 352706-68-4P 352706-69-5P 352706-70-8P
352706-71-9P 352706-72-0P 352706-73-1P 352706-74-2P
352706-75-3P 352706-76-4P 352706-77-5P 352706-78-6P 352706-79-7P
352706-80-0P 352706-81-1P 352706-82-2P 352706-83-3P 352706-84-4P
352706-85-5P 352706-86-6P 352706-87-7P 352706-88-8P
352706-89-9P 352706-90-2P 352706-91-3P 352706-92-4P
352706-93-5P 352706-94-6P 352706-95-7P 352706-96-8P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation as acylphosphine oxide photoinitiator)
- IT 79-22-1, Methyl chloroformate 83-01-2 88-10-8 88-95-9,
Phthalic acid dichloride 96-32-2 106-94-5 106-95-6, reactions
108-23-6 109-65-9 312-94-7 501-53-1, Benzyl chloroformate
541-41-3, Ethyl chloroformate 543-27-1 592-34-7 609-67-6
879-18-5, 1-Naphthoyl chloride 933-88-0 937-62-2 938-18-1,
2,4,6-Trimethylbenzoyl chloride 1237-53-2 1871-76-7, Diphenylacetyl
chloride 1885-14-9 1989-53-3, 2,6-Dimethoxybenzoyl chloride
2094-72-6 2937-50-0 3229-00-3 3282-30-2, Pivaloyl chloride
3395-91-3 4300-97-4 4659-45-4, 2,6-Dichlorobenzoyl
chloride 4801-27-8 7144-08-3 7452-59-7 14602-86-9
16331-52-5, 9-Anthracenecarbonyl chloride 17201-83-1 17341-93-4
18908-66-2 20412-38-8 24468-13-1 24625-82-9 25629-50-9
28920-43-6 35718-08-2 40635-66-3 52334-81-3 55150-29-3
57199-00-5 58249-87-9 66270-36-8 79676-60-1
92600-11-8 94923-33-8 109227-12-5
159968-28-2 305813-37-0 352706-99-1
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with lithiated organophosphine)
 IT **644-97-3**, Dichloro(phenyl)phosphine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (lithiation and sequential reaction with acyl chloride)
 RN 644-97-3 HCAPLUS
 CN Phosphonous dichloride, phenyl- (6CI, 8CI, 9CI) (CA INDEX NAME)

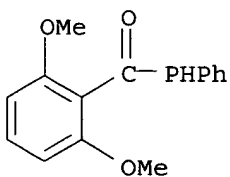


IT **352706-35-5P 352706-36-6P 352706-37-7P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and reaction with acyl chlorides)
 RN 352706-35-5 HCAPLUS
 CN Phosphine, phenyl(2,4,6-trimethylbenzoyl)-, lithium salt (9CI) (CA INDEX NAME)



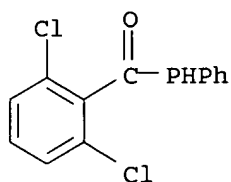
● Li

RN 352706-36-6 HCAPLUS
 CN Phosphine, (2,6-dimethoxybenzoyl)phenyl-, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 352706-37-7 HCAPLUS
 CN Phosphine, (2,6-dichlorobenzoyl)phenyl-, lithium salt (9CI) (CA INDEX NAME)



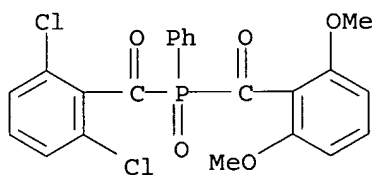
● Li

IT 352706-40-2P 352706-41-3P 352706-49-1P
 352706-50-4P 352706-55-9P 352706-63-9P
 352706-64-0P 352706-73-1P 352706-74-2P
 352706-87-7P 352706-93-5P 352706-94-6P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (preparation as acylphosphine oxide photoinitiator)

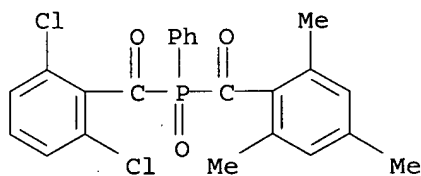
RN 352706-40-2 HCAPLUS

CN Phosphine oxide, (2,6-dichlorobenzoyl)phenyl- (9CI)
 (CA INDEX NAME)



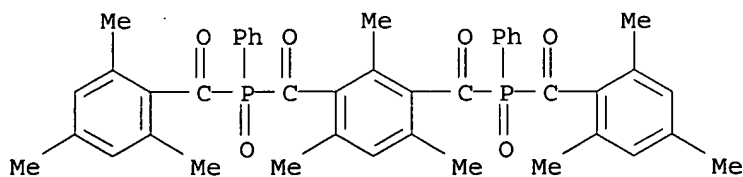
RN 352706-41-3 HCAPLUS

CN Phosphine oxide, (2,6-dichlorobenzoyl)phenyl(2,4,6-trimethoxybenzoyl)-
 (9CI) (CA INDEX NAME)



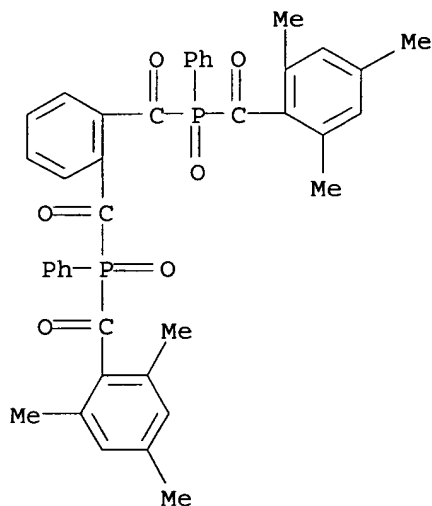
RN 352706-49-1 HCAPLUS

CN Phosphine oxide, [(2,4,6-trimethyl-1,3-phenylene)dicarbonyl]bis[phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)]



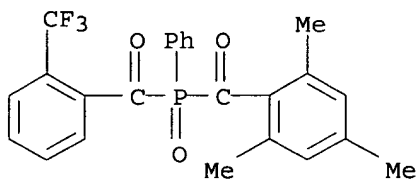
RN 352706-50-4 HCAPLUS

CN Phosphine oxide, (1,2-phenylenedicarbonyl)bis[phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



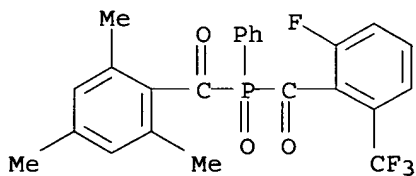
RN 352706-55-9 HCAPLUS

CN Phosphine oxide, phenyl[2-(trifluoromethyl)benzoyl](2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



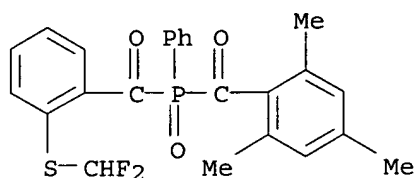
RN 352706-63-9 HCAPLUS

CN Phosphine oxide, [2-fluoro-6-(trifluoromethyl)benzoyl]phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



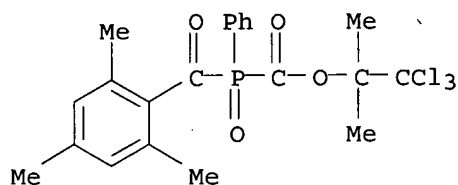
RN 352706-64-0 HCAPLUS

CN Phosphine oxide, [2-[(difluoromethyl)thio]benzoyl]phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



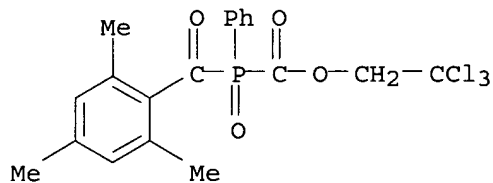
RN 352706-73-1 HCAPLUS

CN Phosphinecarboxylic acid, phenyl(2,4,6-trimethylbenzoyl)-, 2,2,2-trichloro-1,1-dimethylethyl ester, oxide (9CI) (CA INDEX NAME)



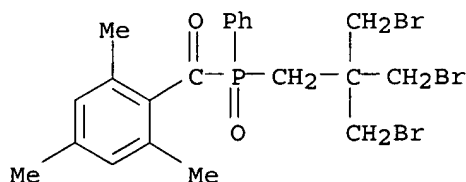
RN 352706-74-2 HCAPLUS

CN Phosphinecarboxylic acid, phenyl(2,4,6-trimethylbenzoyl)-, 2,2,2-trichloroethyl ester, oxide (9CI) (CA INDEX NAME)



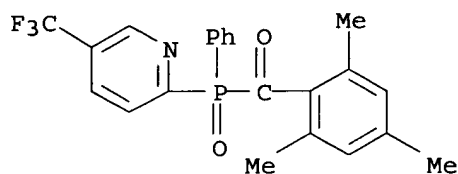
RN 352706-87-7 HCAPLUS

CN Phosphine oxide, [3-bromo-2,2-bis(bromomethyl)propyl]phenyl(2,4,6-trimethylbenzoyl)- (9CI) (CA INDEX NAME)



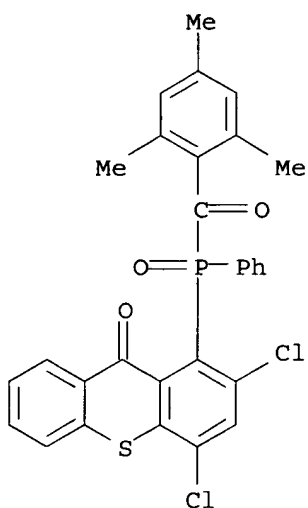
RN 352706-93-5 HCAPLUS

CN Pyridine, 2-[phenyl(2,4,6-trimethylbenzoyl)phosphinyl]-5-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 352706-94-6 HCAPLUS

CN 9H-Thioxanthen-9-one, 2,4-dichloro-1-[phenyl(2,4,6-trimethylbenzoyl)phosphinyl]- (9CI) (CA INDEX NAME)



IT 88-95-9, Phthalic acid dichloride 312-94-7

609-67-6 3229-00-3 4300-97-4 4659-45-4

, 2,6-Dichlorobenzoyl chloride 4801-27-8 17341-93-4

25629-50-9 52334-81-3 66270-36-8

79676-60-1 92600-11-8 94923-33-8

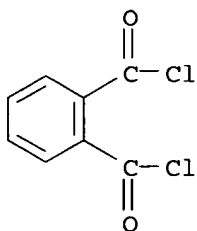
109227-12-5 159968-28-2 352706-99-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction with lithiated organophosphine)

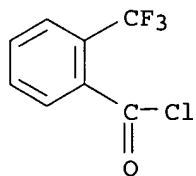
RN 88-95-9 HCAPLUS

CN 1,2-Benzenedicarbonyl dichloride (9CI) (CA INDEX NAME)

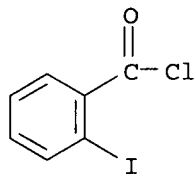


RN 312-94-7 HCAPLUS

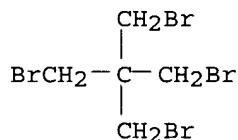
CN Benzoyl chloride, 2-(trifluoromethyl)- (9CI) (CA INDEX NAME)



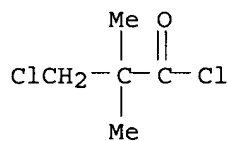
RN 609-67-6 HCAPLUS
 CN Benzoyl chloride, 2-iodo- (9CI) (CA INDEX NAME)



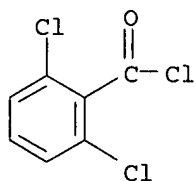
RN 3229-00-3 HCAPLUS
 CN Propane, 1,3-dibromo-2,2-bis(bromomethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



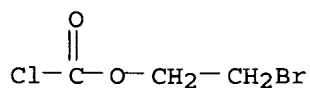
RN 4300-97-4 HCAPLUS
 CN Propanoyl chloride, 3-chloro-2,2-dimethyl- (9CI) (CA INDEX NAME)



RN 4659-45-4 HCAPLUS
 CN Benzoyl chloride, 2,6-dichloro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

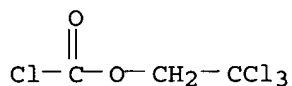


RN 4801-27-8 HCAPLUS
 CN Carbonochloridic acid, 2-bromoethyl ester (9CI) (CA INDEX NAME)



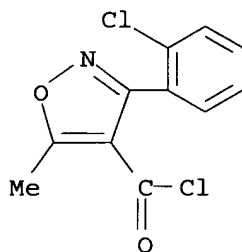
RN 17341-93-4 HCAPLUS

CN Carbonochloridic acid, 2,2,2-trichloroethyl ester (9CI) (CA INDEX NAME)



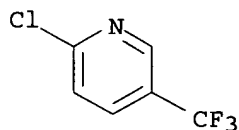
RN 25629-50-9 HCAPLUS

CN 4-Isioxazolecarbonyl chloride, 3-(2-chlorophenyl)-5-methyl- (9CI) (CA INDEX NAME)



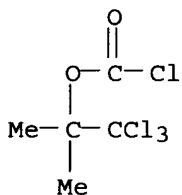
RN 52334-81-3 HCAPLUS

CN Pyridine, 2-chloro-5-(trifluoromethyl)- (9CI) (CA INDEX NAME)



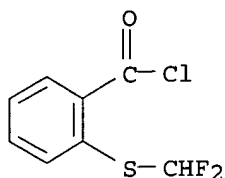
RN 66270-36-8 HCAPLUS

CN Carbonochloridic acid, 2,2,2-trichloro-1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

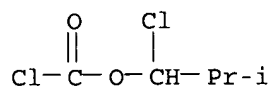


RN 79676-60-1 HCAPLUS

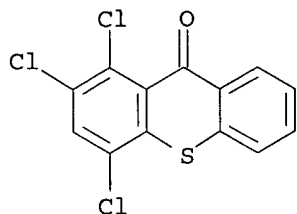
CN Benzoyl chloride, 2-[(difluoromethyl)thio]- (9CI) (CA INDEX NAME)



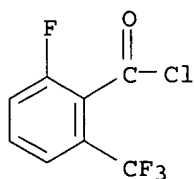
RN 92600-11-8 HCAPLUS
 CN Carbonochloridic acid, 1-chloro-2-methylpropyl ester (9CI) (CA INDEX NAME)



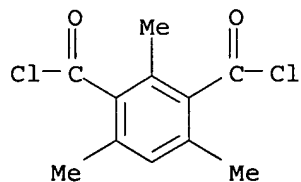
RN 94923-33-8 HCAPLUS
 CN 9H-Thioxanthen-9-one, 1,2,4-trichloro- (9CI) (CA INDEX NAME)



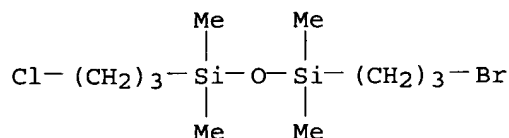
RN 109227-12-5 HCAPLUS
 CN Benzoyl chloride, 2-fluoro-6-(trifluoromethyl)- (9CI) (CA INDEX NAME)



RN 159968-28-2 HCAPLUS
 CN 1,3-Benzenedicarbonyl dichloride, 2,4,6-trimethyl- (9CI) (CA INDEX NAME)

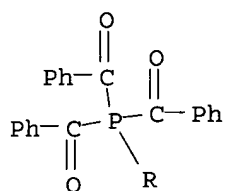
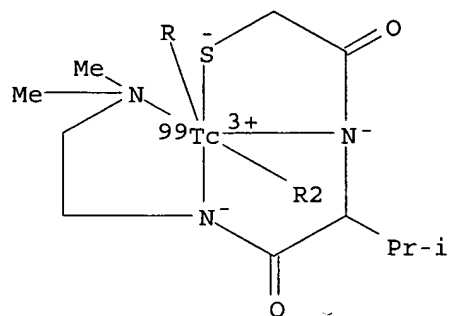


RN 352706-99-1 HCAPLUS
 CN Disiloxane, 1-(3-bromopropyl)-3-(3-chloropropyl)-1,1,3,3-tetramethyl-
 (9CI) (CA INDEX NAME)

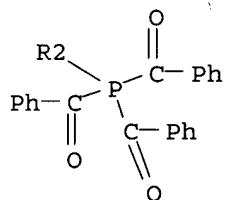


L63 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2002:679211 HCAPLUS
 DOCUMENT NUMBER: 138:133196
 TITLE: Preparation and biodistribution of mixed complexes of 99Tcm-phosphine
 AUTHOR(S): Zhang, Hua-Bei; Li, Bo; Qi, Chuan-Min; Xie, Yi; Guo, Xue-Feng; Dai, Mei; Liu, Bo-Li
 CORPORATE SOURCE: Department of Chemistry, Beijing Normal University, Beijing, 100875, Peop. Rep. China
 SOURCE: He Huaxue Yu Fangshe Huaxue (2002), 24(2), 84-90
 CODEN: HHHHDH; ISSN: 0253-9950
 PUBLISHER: Yuanzineng Chubanshe
 DOCUMENT TYPE: Journal
 LANGUAGE: Chinese
 AB A N3S ligand (MVNM) and four phosphine ligands are synthesized. 99Tcm-MVNM, which is prepared under room temperature through ligand-exchange reaction, reacts with the four phosphine ligands resp. to obtain mixed complexes of 99Tcm-MVNM-phosphine. The distribution results in mice indicate these complexes exhibit certain myocardial uptake.
 CC 8-9 (Radiation Biochemistry)
 Section cross-reference(s): 63
 IT 492468-03-8P 492468-04-9P **492468-05-0P 492468-06-1P**
 RL: PKT (Pharmacokinetics); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation and biodistribution of mixed complexes of 99Tcm-phosphine)
 IT **492468-05-0P 492468-06-1P**
 RL: PKT (Pharmacokinetics); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation and biodistribution of mixed complexes of 99Tcm-phosphine)
 RN 492468-05-0 HCAPLUS
 CN Technetium-99Tc, [(2S)-N-[2-(dimethylamino-κN)ethyl]-2-[[[(mercapto-κS)acetyl]amino-κN]-3-methylbutanamidato(3-)-κN]bis(tribenzoylphosphine-κP)-, (OC-6-52)- (9CI) (CA INDEX NAME)

PAGE 1-A

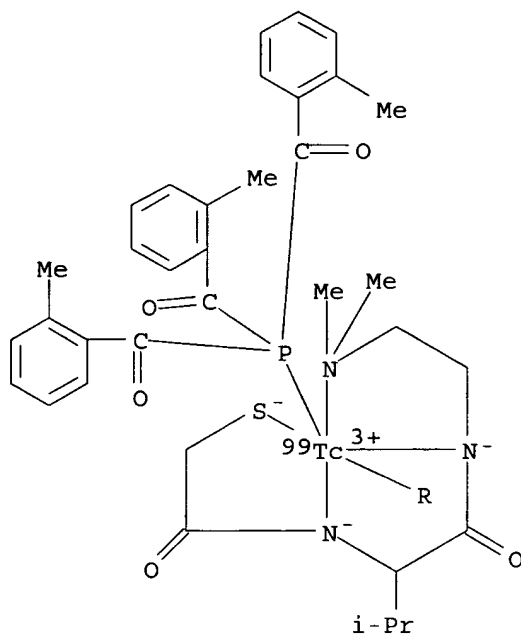


PAGE 2-A

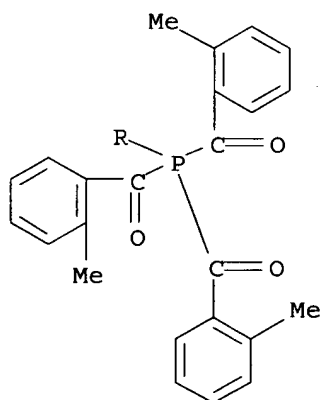


RN 492468-06-1 HCAPLUS
 CN Technetium-99Tc, [(2S)-N-[2-(dimethylamino-κN)ethyl]-2-[[[(mercapto-κS)acetyl]amino-κN]-3-methylbutanamidato(3-)-κN]bis[tris(2-methylbenzoyl)phosphine-κP]-, (OC-6-52)-(9CI)
 (CA INDEX NAME)

PAGE 1-A



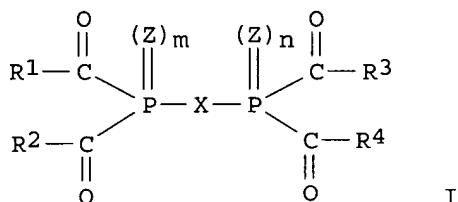
PAGE 2-A



L63 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1995:963518 HCAPLUS
 DOCUMENT NUMBER: 123:341295
 TITLE: Preparation of dimeric bisacylphosphines and
 bisacylphosphine oxides as photoinitiators
 INVENTOR(S): Leppard, David G.; Koehler, Manfred
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
 SOURCE: Eur. Pat. Appl., 38 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 670323	A1	19950906	EP 1995-810102	19950217
EP 670323	B1	20000628		
R: BE, DE, ES, FR, GB, IT, NL				
ES 2148463	T3	20001016	ES 1995-810102	19950217
CA 2143571	AA	19950903	CA 1995-2143571	19950228
JP 07278215	A2	19951024	JP 1995-68625	19950302
JP 3653676	B2	20050602		
US 5723512	A	19980303	US 1996-669807	19960627
PRIORITY APPLN. INFO.:			CH 1994-614	A 19940302
			US 1995-392563	B1 19950223
OTHER SOURCE(S):		MARPAT 123:341295		
GI				



AB The title compds. [I; R1-R4 = C1-20 alkyl, cycloalkyl, C2-8 alkenyl, (un)substituted Ph, (un)substituted naphthyl, (un)substituted biphenyl; R1-R4 can form an (un)substituted 5- or 6-membered heterocyclic ring with O, S, or N, etc.; R6 = C1-4 alkyl, Ph; X = alkylene (un)interrupted with ≥ 1 heteroatom or group, alkenylene, (un)substituted phenylene, (decahydro)naphthylene, etc.] were prepared by acylation of phosphines H2PXP2 (X as defined) with acyl chlorides followed by oxidation or conversion to phosphine sulfides (no data for the latter reaction). For example, 2% 1,10-bis[bis(2,4,6-trimethylbenzoyl)phosphine oxide]decane (preparation by benzoylation of decamethylenebisphosphine with 2,4,6-Me3C6H2COCl followed by oxidation with H2O2 given) was added to an UV-curable pigmented coating obtained by blending polyester acrylate oligomer (Ebecryl 830) 67.5, hexanediol diacrylate 5.0, trimethylolpropane triacrylate 2.5, and TiO2 25.0 parts, the blend was coated on an Al substrate and cured with 2 passes at 10 m/min under an 80-W/cm Hg lamp to give a wiping resistant coating with pendulum hardness 113 immediately and 163 after 15-min postcuring.

IC ICM C07F009-50

ICS C08F002-50; G03F007-029; C07F009-53

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 38, 42, 74

IT 171056-53-4P 171056-54-5P 171056-55-6P

171056-56-7P 171056-57-8P 171056-58-9P

171056-59-0P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of dimeric bisacylphosphines and bisacylphosphine oxides as photoinitiators)

IT 171056-53-4P 171056-54-5P 171056-55-6P

171056-56-7P 171056-57-8P 171056-58-9P

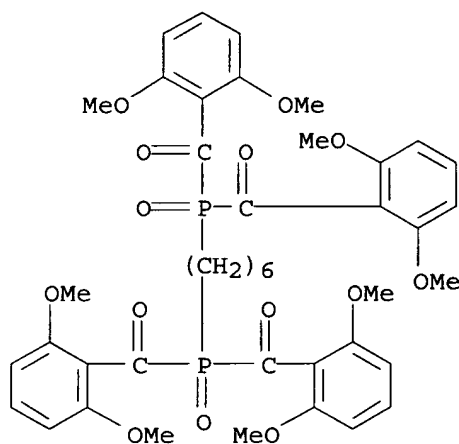
171056-59-0P

RL: IMF (Industrial manufacture); PREP (Preparation)

(preparation of dimeric bisacylphosphines and bisacylphosphine oxides as photoinitiators)

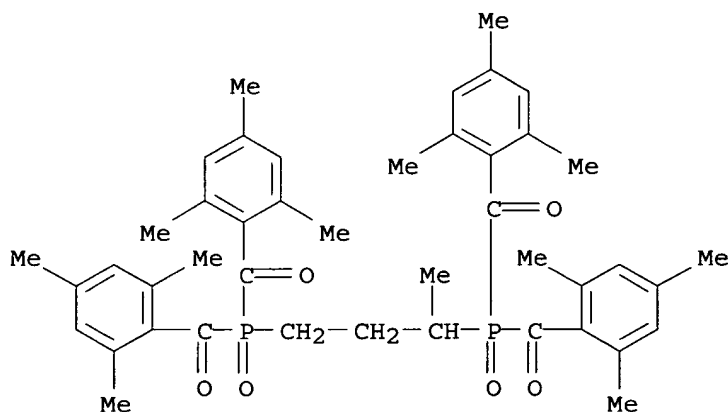
RN 171056-53-4 HCAPLUS

CN Phosphine oxide, 1,6-hexanediylbis[bis(2,6-dimethoxybenzoyl) - (9CI) (CA INDEX NAME)



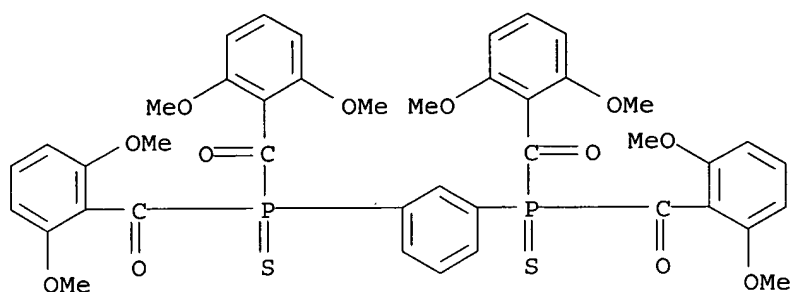
RN 171056-54-5 HCAPLUS

CN Phosphine oxide, (1-methyl-1,3-propanediyl)bis[bis(2,4,6-trimethylbenzoyl) - (9CI) (CA INDEX NAME)



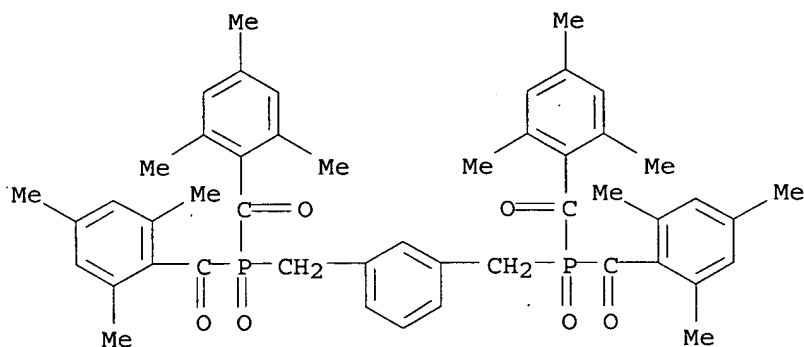
RN 171056-55-6 HCAPLUS

CN Phosphine sulfide, 1,3-phenylenebis[bis(2,6-dimethoxybenzoyl) - (9CI) (CA INDEX NAME)



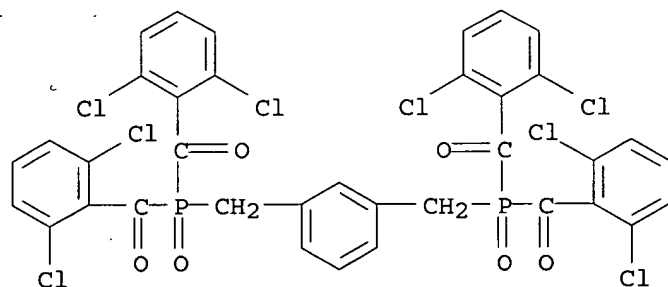
RN 171056-56-7 HCAPLUS

CN Phosphine oxide, [1,3-phenylenebis(methylene)]bis[bis(2,4,6-trimethylbenzoyl)]-(9CI) (CA INDEX NAME)



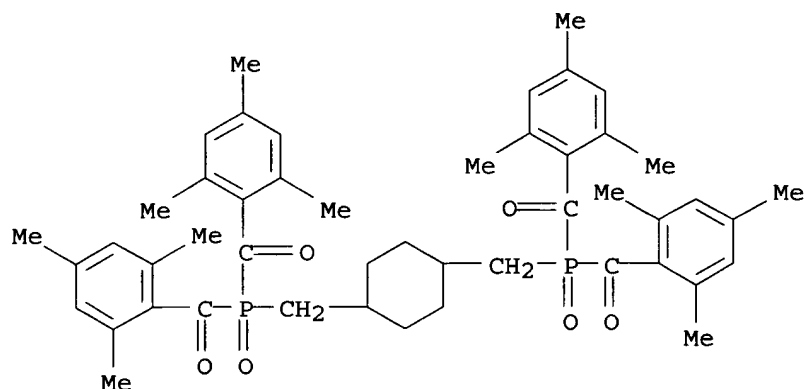
RN 171056-57-8 HCAPLUS

CN Phosphine oxide, [1,3-phenylenebis(methylene)]bis[bis(2,6-dichlorobenzoyl)]-(9CI) (CA INDEX NAME)

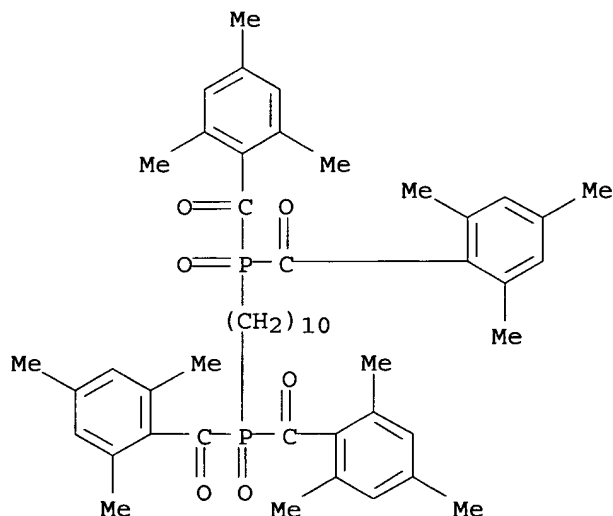


RN 171056-58-9 HCAPLUS

CN Phosphine oxide, [1,4-cyclohexanediylbis(methylene)]bis[bis(2,4,6-trimethylbenzoyl)]-(9CI) (CA INDEX NAME)



RN 171056-59-0 HCAPLUS

CN Phosphine oxide, 1,10-decanediylbis[bis(2,4,6-trimethylbenzoyl)- (9CI)
(CA INDEX NAME)

L63 ANSWER 5 OF 6 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 129:68885 MARPAT

TITLE: Photoinitiator mixture containing acylphosphine oxide and benzophenone derivatives

INVENTOR(S): Beck, Erich; Kandzia, Christof; Prantl, Bernhard; Lokai, Matthias; Enenkel, Peter; Keil, Edmund; Menzel, Klaus

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

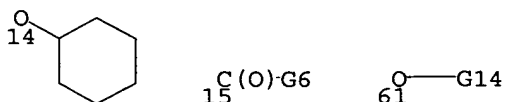
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19650562	A1	19980610	DE 1996-19650562	19961205
WO 9828340	A1	19980702	WO 1997-EP6423	19971118
W: CA, CN, KR, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 942937	A1	19990922	EP 1997-952778	19971118
EP 942937	B1	20010418		
R: BE, CH, DE, FR, GB, IT, LI, SE				
TW 434288	B	20010516	TW 1997-86117781	19971126
US 6207727	B1	20010327	US 1998-147459	19981230
KR 2000057388	A	20000915	KR 1999-704943	19990604
PRIORITY APPLN. INFO.:			DE 1996-19650562	19961205
			WO 1997-EP6423	19971118

AB Curing photoinitiators contain at least one mono- or diacylphosphine oxide R1R2P(O)C(O)R3 (R1 = organic group; R2 = organic group optionally including a carbonyl; R3 = organic group optionally including another phosphine oxide) and at least one benzophenone containing at least one substituent at a total level of 0.005-10%. The photoinitiators have low volatility and are not inhibited by air and are suitable for UV-cured coatings. Several examples were given using either 2,4,6-trimethylbenzoyl(diphenyl)phosphine oxide or 2,4,6-trimethylbenzoyl(ethoxy)phenylphosphine oxide and an 80:20 mixture of 2,4,6-trimethylbenzophenone and 4-methylbenzophenone with Laromer PO 84F pigmented and clear coatings.

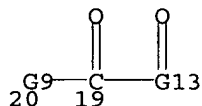
MSTR 1

0
||
G16

- G1 = alkyl <containing 1-18 C> /
 alkyl <containing 1-4 C> (substd. by 1 or more G2) /
 cycloalkyl <containing 5-8 C> /
 alkyl <containing 1-3 C> (substd. by Ph) /
 Ph (opt. substd. by 1 or more G3) /
 naphthyl (opt. substd. by 1 or more G3) /
 biphenyl (opt. substd. by 1 or more G3) /
 heterocycle <containing zero or more N, zero or more O,
 zero or more S (no other heteroatoms),
 5- to 6-membered monocyclic ring> / (Example: CH2CH2CHMe2)
- G2 = halo / alkoxy <containing 1-6 C>
- G3 = halo / alkyl <containing 1-12 C> /
 alkoxy <containing 1-12 C>
- G4 = Ph (opt. substd. by 1 or more G3) /
 naphthyl (opt. substd. by 1 or more G3) /
 biphenyl (opt. substd. by 1 or more G3) /
 heterocycle <containing zero or more N, zero or more O,
 zero or more S (no other heteroatoms),
 5- to 6-membered monocyclic ring> /
 alkoxy <containing 1-18 C> / OPh (opt. substd. by 1 or more
 G5) / OCH2Ph / 14 / 15 / (Example: 61)



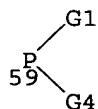
- G5 = halo / alkyl <containing 1-4 C> /
alkoxy <containing 1-4 C>
- G6 = alkyl <containing 1-18 C> /
alkyl <containing 1-4 C> (substd. by 1 or more G7) /
cycloalkyl <containing 5-8 C> /
alkyl <containing 1-3 C> (substd. by Ph) /
Ph (opt. substd. by 1 or more G18) /
naphthyl (opt. substd. by 1 or more G3) /
biphenyl (opt. substd. by 1 or more G3) /
heterocycle <containing zero or more N, zero or more O,
zero or more S (no other heteroatoms),
5- to 6-membered monocyclic ring>
- G7 = halo / alkoxy <containing 1-4 C>
- G8 = alkyl <containing 1-18 C> /
alkyl <containing 1-4 C> (substd. by 1 or more G2) /
cycloalkyl <containing 5-8 C> /
alkyl <containing 1-3 C> (substd. by Ph) /
Ph (opt. substd. by 1 or more G18) /
naphthyl (opt. substd. by 1 or more G3) /
biphenyl (opt. substd. by 1 or more G3) /
heterocycle <containing zero or more N, zero or more O,
zero or more S (no other heteroatoms),
5- to 6-membered monocyclic ring> / **20**



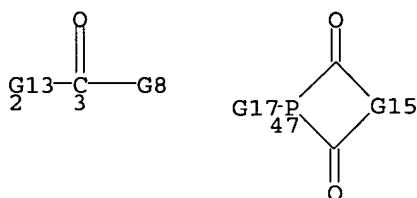
- G9 = alkylene <containing 2-8 C> / **cyclohexylene** /
phenylene (opt. substd. by 1 or more G10) / 24-3 25-19

G11-G12
24 25

- G10 = halo / alkyl <containing 1-4 C> /
alkoxy <containing 1-4 C>
- G11 = phenylene (opt. substd. by 1 or more G10)
- G12 = phenylene (opt. substd. by 1 or more G10)
- G13 = **59** / heterocycle <containing 1 or more heteroatoms,
1 or more P, attached through 1 P>



- G14 = Et / Pr-n / Pr-i / Bu-n / Bu-i / pentyl
- G15 = alkylene <containing 2-12 C> / CH=CH / o-C6H4
- G16 = 2 / 47



G17 = alkyl <containing 1-18 C> /
 alkyl <containing 1-4 C> (substd. by 1 or more G2) /
 cycloalkyl <containing 5-8 C> /
 alkyl <containing 1-3 C> (substd. by Ph) /
 Ph (opt. substd. by 1 or more G3) /
 naphthyl (opt. substd. by 1 or more G3) /
 biphenyl (opt. substd. by 1 or more G3) /
 heterocycle <containing zero or more N, zero or more O,
 zero or more S (no other heteroatoms),
 5- to 6-membered monocyclic ring>
 G18 = halo / alkyl <containing 1-12 C> /
 alkoxy <containing 1-12 C> / (Examples: Me / Et / Pr-i /
 OMe / Cl)
 Patent location: claim 1

L63 ANSWER 6 OF 6 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 116:43140 MARPAT
 TITLE: Mixture of photoinitiators
 INVENTOR(S): Koehler, Manfred; Angerer, Hermann Franz; Litzler,
 Andre
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.
 SOURCE: Eur. Pat. Appl., 12 pp.
 CODEN: EPXXDW
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

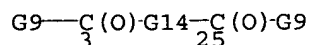
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 446175	A2	19910911	EP 1991-810134	19910228
EP 446175	A3	19911121		
R: DE, FR, GB, IT				
CA 2037769	AA	19910910	CA 1991-2037769	19910307
JP 04220404	A2	19920811	JP 1991-69127	19910308
			CH 1990-764	19900309

PRIORITY APPLN. INFO.:
 AB A photopolymn. initiator mixture and photohardenable composition containing the mixture

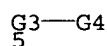
are claimed where the initiator is a mixture of 3 components:
 R1P(:O)R2C(:O)R3(I) 100 weight%, II 10-70 weight%, and ≥1 from III 10-70 weight%. The unspecified groups in I have the following definitions: R1 = alkyl, cycloalkyl, phenylalkyl, Ph, naphthyl, etc.; R2 = Ph, naphthyl, biphenyl, heterocyclyl, alkoxy, phenoxy, benzyloxy, cyclohexyloxy, COR4 (R4 = R1); R3 = R1, XCOPOR1R2 (X = alkylene, cycloalkylene, phenylene, biphenylene); R4 = R7 or R3-R4 forming alkylene, vinylene, o-phenylene; R1-R2 may form ring including the P atom. The groups in II are as follows: R6, R7 = H, alkyl, Ph, alkoxy, phenoxy, alkythio, phenylthio, dialkylamine, piperidino, morpholino, halogen; R8, R9 = alkyl, alkenyl, phenylalkyl, cycloalkyl; R8-R8 together may form alkylene. In III the

groups are as follow: R11, R12, R13 = H, alkyl, alkoxy, alkylthio, halogen, alkoxycarbonyl. The photoinitiator mixture is suitable for photohardening of white paints.

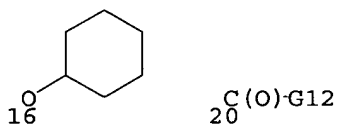
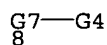
MSTR 1D



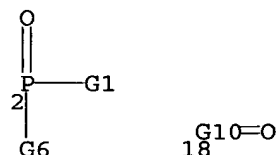
G1 = alkyl <containing 1-18 C> /
 alkyl <containing 1-4 C> (substd. by 1 or more G2) /
 cycloalkyl <containing 5-8 C> /
 alkyl <containing 1-3 C> (substd. by 1 or more Ph) / 5 /
 naphthyl (opt. substd.) / heterocycle <containing 1
 heteroatom, zero or more N, zero or more O,
 zero or more S (no other heteroatoms),
 5- to 6-membered monocyclic ring>



G2 = halo / alkoxy <containing 1-6 C>
 G3 = phenylene (opt. substd.)
 G4 = H / halo / alkyl <containing 1-12 C> /
 alkoxy <containing 1-12 C> / Ph (opt. substd.)
 G6 = 8 / naphthyl (opt. substd.) /
 heterocycle <containing 1 heteroatom, zero or more N,
 zero or more O, zero or more S (no other heteroatoms),
 5- to 6-membered monocyclic ring> /
 alkoxy <containing 1-18 C> / OPh (opt. substd.) / OCH₂Ph /
 16 / alkylcarbonyl <containing 1-18 C> /
 alkylcarbonyl <containing 1-4 C> (substd. by 1 or more G11) /
 20 / alkylcarbonyl <containing 1-3 C>
 (substd. by 1 or more Ph)



G7 = phenylene (opt. substd.)
 G9 = 2 / 18



G10 = heterocycle <containing 1 or more heteroatoms,
 1 or more P, attached through 1 or more P,
 2 or more single bonds>
 G11 = halo / alkoxy <containing 1-4 C>

G12 = cycloalkyl <containing 5-8 C> / 22 /
naphthyl (opt. substd.) / heterocycle <containing 1
heteroatom, zero or more N, zero or more O,
zero or more S (no other heteroatoms),
5- to 6-membered monocyclic ring>

G13-G4
22

G13 = **phenylene** (opt. substd.)
G14 = alkyl <containing 2-8 C> / **cyclohexylene** /
phenylene (opt. substd.) / 27-3 28-25

G15-G16
27 28

G15 = phenylene (opt. substd.)
G16 = phenylene (opt. substd.)
Patent location: claim 1

WPI structure search (post-1999)

Nwaonicha 10/517231

07/06/2006

=> file wpix

FILE 'WPIX' ENTERED AT 10:43:01 ON 06 JUL 2006
COPYRIGHT (C) 2006 THE THOMSON CORPORATION

FILE LAST UPDATED: 3 JUL 2006 <20060703/UP>
MOST RECENT DERWENT UPDATE: 200642 <200642/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
<http://scientific.thomson.com/support/patents/coverage/latestupdates/>

>>> PLEASE BE AWARE OF THE NEW IPC REFORM IN 2006, SEE
http://www.stn-international.de/stndatabases/details/ipc_reform.html and
<http://scientific.thomson.com/media/scpdf/ipcrdwpf.pdf> <<<

>>> FOR FURTHER DETAILS ON THE FORTHCOMING DERWENT WORLD PATENTS
INDEX ENHANCEMENTS PLEASE VISIT:
http://www.stn-international.de/stndatabases/details/dwpi_r.html <<<
'BIX' IS DEFAULT SEARCH FIELD FOR 'WPIX' FILE

=> d stat que L56
L56 2 SEA FILE=WPIX ABB=ON PLU=ON (RACO5E/DCN OR RACO5O/DCN OR
RA552Z/DCN OR RA5530/DCN)

=> d stat que L57
L57 2 SEA FILE=WPIX ABB=ON PLU=ON (448417-0-0-0/DCRE OR 448418-0-0-
0/DCRE OR 825356-0-0-0/DCRE OR 825366-0-0-0/DCRE)

=> s L56 or L57
L64 2 L56 OR L57

← ALL PREVIOUSLY PRINTED

=> dup rem L62 L48 L64
FILE 'HCAPLUS' ENTERED AT 10:44:08 ON 06 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'MARPAT' ENTERED AT 10:44:08 ON 06 JUL 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2006 American Chemical Society (ACS)

FILE 'WPIX' ENTERED AT 10:44:08 ON 06 JUL 2006
COPYRIGHT (C) 2006 THE THOMSON CORPORATION
PROCESSING COMPLETED FOR L62
PROCESSING COMPLETED FOR L48
PROCESSING COMPLETED FOR L64
L65 6 DUP REM L62 L48 L64 (4 DUPLICATES REMOVED)
ANSWERS '1-4' FROM FILE HCAPLUS
ANSWERS '5-6' FROM FILE MARPAT

=> s L63 not L65
L66 0 L63 NOT L65

=>

This Page Blank (uspto)